

THE AMERICAN
School Board Journal

SEP 4 1930

A PERIODICAL OF SCHOOL ADMINISTRATION



SEPTEMBER, 1930

THE BRUCE PUBLISHING COMPANY
NEW YORK MILWAUKEE CHICAGO

*In This Issue: Blackboards, by H. W. Schmidt
Arkansas Rises Educationally, by M. E. Overholt*

FEATURES OF THE VOGEL NUMBER TEN AND TEN-A SEAT-ACTION CLOSETS

OF SPECIAL INTEREST TO SCHOOL BOARDS



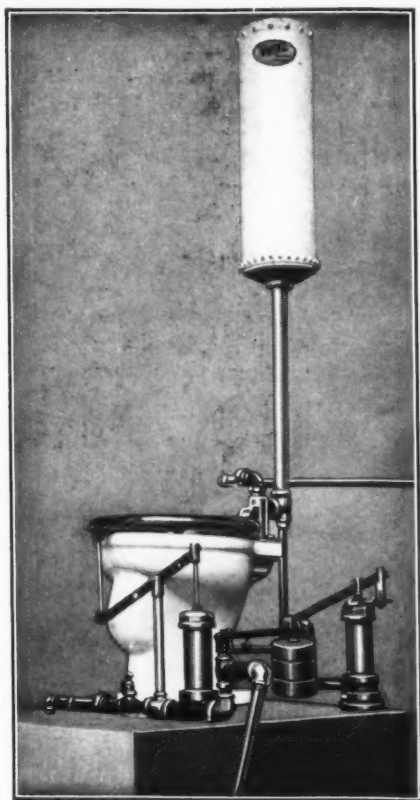
{ Vogel Number Ten-A Seat-Action Closet. Tank Concealed }
It operates easily

VOGEL Number Ten and Ten-A seat-action closets have all these features. The valve, being made of high tension bronze, and having few moving parts, will last for years without a repair. We have proved this by the endurance test—A **VOGEL** Number Ten having now flushed 175,000 times, and not even a washer has been renewed—the equivalent of 60 years' use. Illustration at right shows outfit on test.

The tank, the seat, and the bowl are all of the finest quality materials obtainable.

Never more than 4 gallons of water are used in a flush. Because of the air pressure in the tank, an extremely powerful flush is obtained on this amount of water. The fact that **VOGEL** Number Ten and Ten-A Closets

Number Ten Closet on the Endurance Test



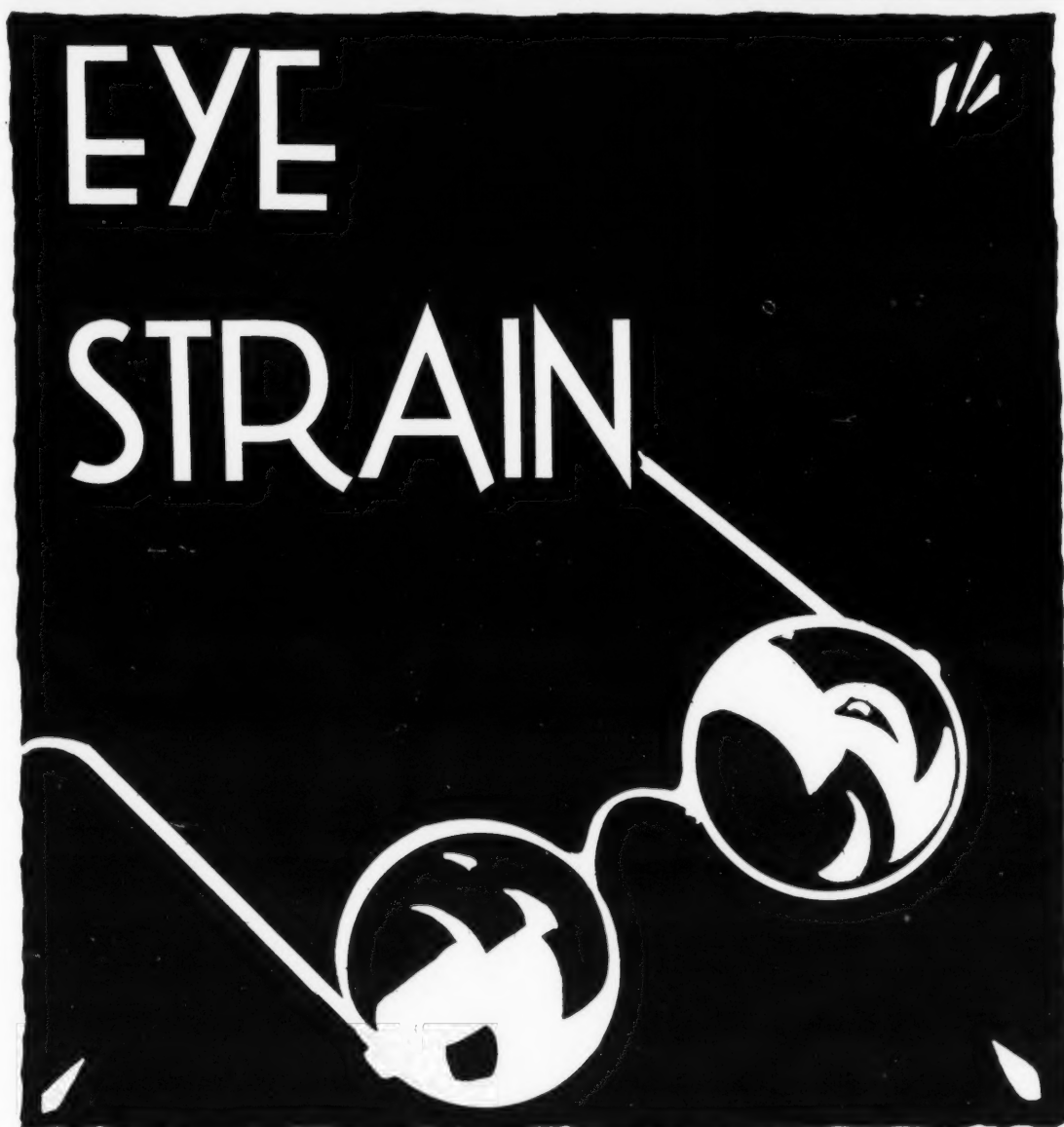
are seat-action means that children cannot forget to flush them. When the seat is released the closet must flush.

And they are good-looking closets. The Number Ten has the tank exposed, and with the Number Ten-A the tank is concealed behind the wall.

We have a booklet on **VOGEL** Number Ten and Ten-A Closets designed for architects, which is also of great interest to school boards. We shall be glad to send a copy of this promptly upon request.

JOSEPH A. VOGEL CO.
Wilmington, Delaware St. Louis, Missouri

VOGEL PATENTED *Products*



—OFTEN THE RESULT OF “POOR BOARDS”!

This statement should arouse everyone interested in Education to thoroughly investigate both sides of the subject — inferior, imitation boards and — “Pyramid Brand” NATURAL SLATE BLACKBOARDS.

NATURAL SLATE BLACKBOARDS are the choice of the leading universities, colleges and schools of the country. A few of the reasons for their great popularity are . . . Ideal writing surface . . . Can be cleaned daily . . . Slate is non-absorbent . . . Easily read from any position . . . No finish to wear off . . . No glare . . . Easy on students' eyes . . . Will never peel or crack . . . Can be washed with disinfectants . . . Fire-proof . . . Outlasts the building . . . Specified by leading architects.

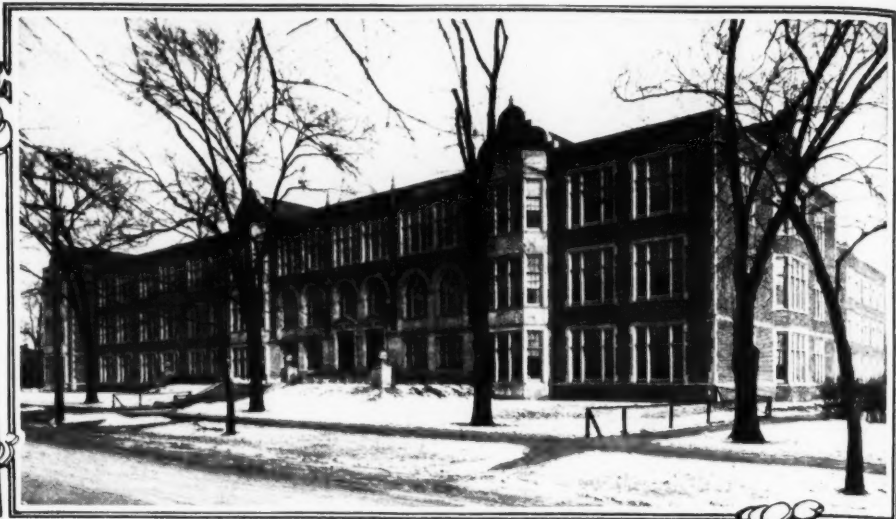
Your copies of two interesting books on NATURAL SLATE BLACKBOARDS will be mailed upon request.

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NATURAL SLATE BLACKBOARDS

Natural Slate Blackboards Outlast the Building



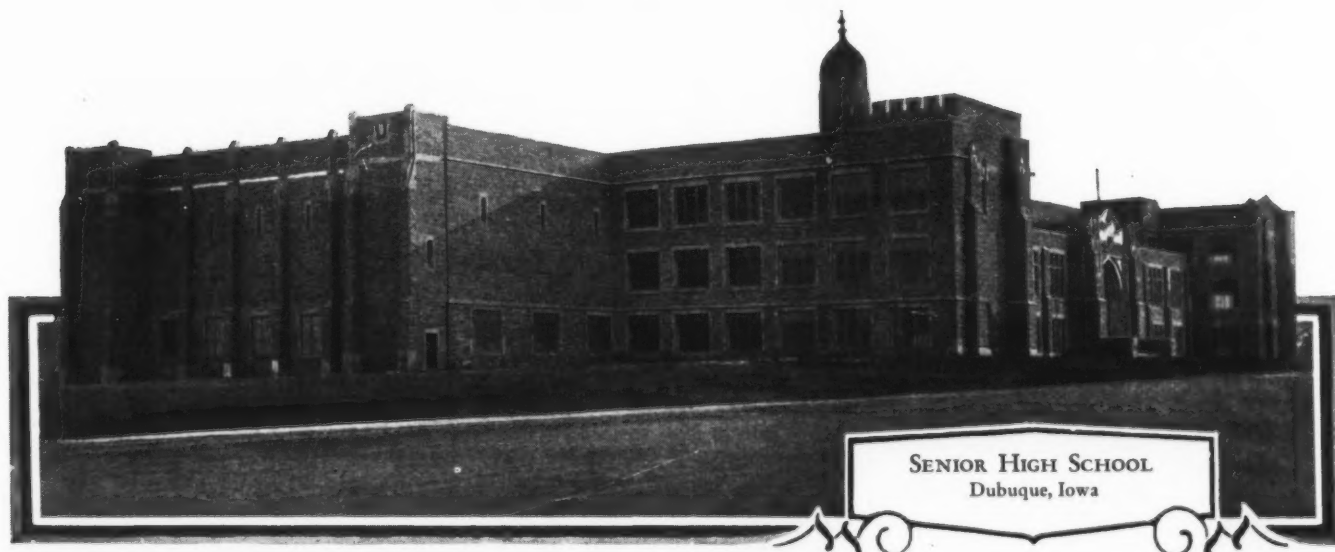
Three views of the HAVEN SCHOOL, Evanston, Ill. This beautiful new structure embodies all of the latest thought on school building. Conveniences of every description are here in use and materials of all classes have been carefully selected. Maintenance problems have not been neglected—those in authority well know that an institution such as this deserves the best of care—Midland products are in daily use at the Haven School. Among those items are Midland Liquid Waxoleum, Midland Furniture Lustre and the Midland Scrubbing and Polishing Machines—Three machines do the work of keeping Haven School spotless. Better schools and better upkeep is the new order amongst School Authorities throughout the United States.

GET DETAILS OF THE MIDLAND SCHOOL HOUSEKEEPING SYSTEM

A complete system of school housekeeping, the modern science of school building maintenance has been conceived and perfected by Midland Maintenance Engineers. When we realize the millions of dollars invested in school property, the importance of efficient and economical upkeep becomes apparent. It is the aim of the Midland national

organization to provide the finest materials and approved methods of school-building maintenance. A man nationally known and recognized for his work in this field is in charge of the Midland School Housekeeping System. He has prepared textbooks on this subject which will be supplied without cost to those interested in this work.

MIDLAND CHEMICAL LABORATORIES, Inc.
DUBUQUE, IOWA



SENIOR HIGH SCHOOL
Dubuque, Iowa

KEWANEE

Water Heating GARBAGE BURNERS

Three Types—Fourteen Sizes to raise from
200 to 2600 gallons, 50 degrees, per hour.

Hot Water is as necessary as Heat

ECONOMICAL because a Kewanee uses garbage and rubbish
as part of the fuel necessary for heating water—saving
from 30 to 50 per cent of the fuel used by ordinary
tank heaters.

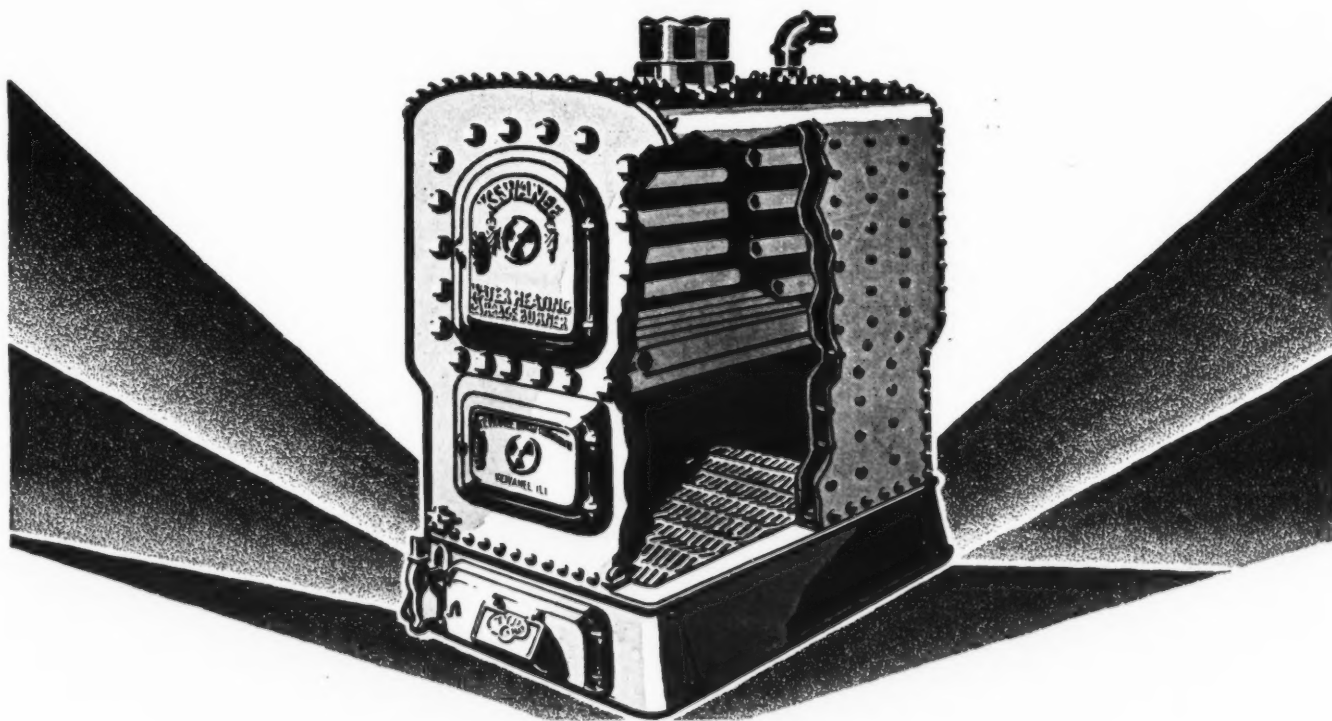
SANITARY because they burn the garbage
and refuse, on the premises, before it has
a chance to decay.

KEWANEE BOILER CORPORATION

division of American Radiator and Standard Sanitary Corporation

Kewanee, Illinois

Branches in 40 Principal Cities



PAR-LOCK SUCCESS

Results from Scientifically Blended ASPHALTS

THE idea of grit embedded in a bituminous coat, as a plaster base, is an idea older than Par-Lock.

But there is no record of successful applications until the Par-Lock organization solved the problem of correct materials and methods.

Even today, contractors will occasionally tell an architect, "I can give you the same thing as Par-Lock."

A review of such efforts and the resulting plaster failures is the reason for this advertisement.

Par-Lock does not need protection from these experimenters—even the protection of its existing patents—because such competition defeats itself. But the architect does need protection.

There are Asphalts and Asphalts

Behind these casual attempts to imitate Par-Lock will be found a careless notion that all asphalts are pretty much alike—a fundamental mistake.

Many waterproofing materials classed as asphalts are by-products of petroleum and vary in accordance with the nature of the crude and the process of refining. Each may be excellent in its place.



Kettling Par-Lock Asphalt

Lake asphalts from distant islands are wonderfully uniform over a term of years yet varying in accordance with their sources in ductility, adhesiveness and melting point.

Native asphalts, that are mined like coal, afford hardness at the expense of other qualities.

Methods of preparation also vary. Asphalts are sometimes marketed as native solids, sometimes kettled or otherwise reduced to liquid form, sometimes mulified for thinning with water.

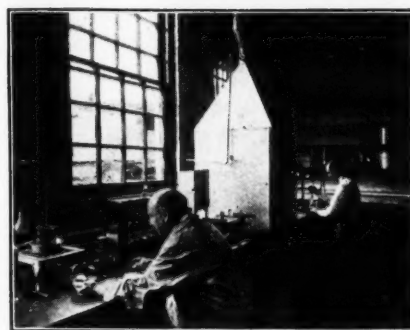


Filling Drums of Par-Lock Asphalt

What Par-Lock Demands in Asphalt

Par-Lock calls for an asphalt sufficiently liquid to flow readily through the Par-Lock gun at normal temperatures. Yet it must have body to form a heavy coating and to hold the grit. There must be ductility to cushion expansion strains and sufficient hardness (with high enough remelting point) to hold the plaster firmly under any possible temperature conditions.

We meet these requirements by blending imported lake asphalts (for ductility and adhesiveness) with a native asphalt that increases the hardness.



Testing Asphalt in Vortex Laboratory

They are kettled according to a formula that is the result of much research, thinned with volatile ingredients, whose composition was learned by long experimentation and placed in 100 barrel tanks for seasoning and decantation, before shipment in new steel containers bearing the Par-Lock label.

Process Tested at Every Stage

All materials and each run of blended asphalt are sampled and subjected to exacting physical and chemical tests in our laboratory.

As a result, when the 55 gallon drums of Par-Lock asphalt go forth to Par-Lock Appliers, we know they will do the job they were meant to do.

The same confidence cannot be extended to any casually selected waterproofing asphalt. Tales of grief that we could tell bear ample testimony to this.

It costs more to produce an asphalt this way than to shop for miscellaneous products, but the confidence you can repose in the Par-Lock Applier (our sole outlet) is well worth the difference.

Par-Lock
Plaster Key

THE VORTEX MANUFACTURING COMPANY

1987 West 77th Street • Cleveland, Ohio

Write to PAR-LOCK APPLIERS OF (Naming City) at Address Given Below

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CHARLOTTE
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CHICAGO
862 Builders Building

CINCINNATI
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CLEVELAND
218 Hunkin-Conkey Bldg.

COLUMBUS
751 South Cassingham Rd.

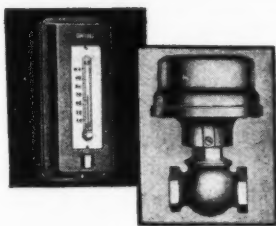
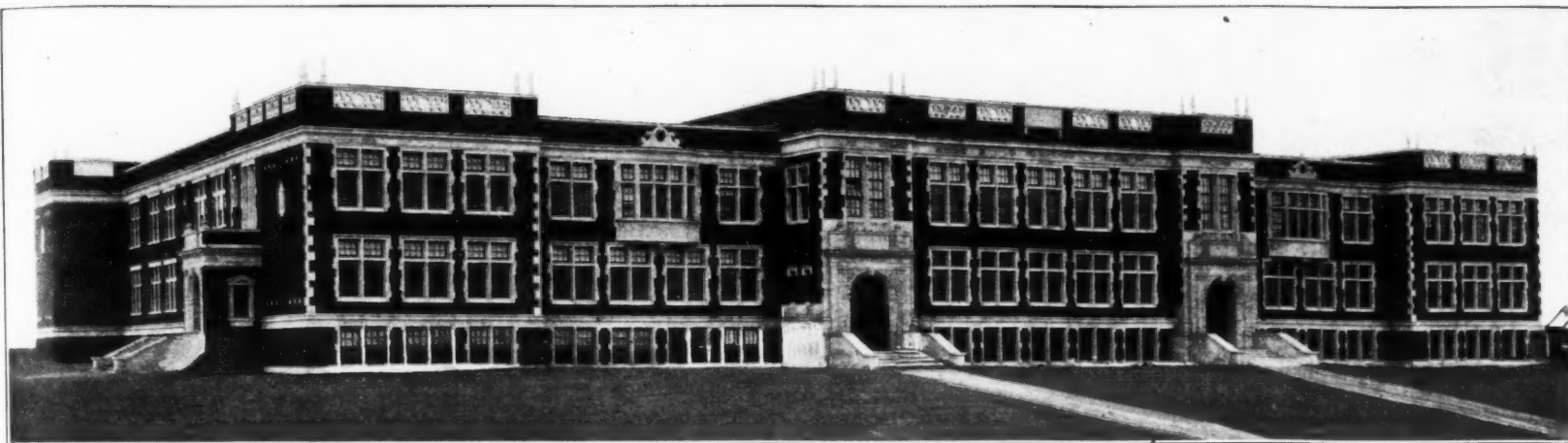
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ANOTHER LEADING SCHOOL BUILDING EQUIPPED WITH JOHNSON CONTROL

Evidence of Its Recognized Value

THE prominent, new Normal School Building, Edmonton, Alberta, Canada, contains 70 Johnson Dual Type Thermostats controlling 83 Sylphon Radiator Valves on the direct radiators: maintaining a constant normal temperature during the school hours and automatically setting back to lower fuel economy temperature for the night: and automatically returning the temperature to normal again next morning. Included in this installation are also a 3-point Johnson Multiple Thermostat controlling 2 coil

valves for the ventilating system; 1 Johnson Insertion Type Humidostat controlling a grid type Humidifier; 4 Johnson Remote Control Switches controlling 4 separate ventilator dampers; 1 Johnson Dual Switch, A Johnson high pressure Electric Air Compressor and 3 air storage tanks. Johnson equipment is complete, with apparatus to meet each school building's individual requirements according to the architect's and engineer's specifications, and applying to every plan, form and system of heating and ventilating:

The All-Metal System. The All-Perfect Graduated Control of Valves and Dampers. The Dual Thermostat (Night and Day) Control: fuel saving 25 to 40 Per Cent.

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Established 1885

MILWAUKEE, WISCONSIN

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JOHNSON HEAT AND HUMIDITY CONTROL



Von Duprin

Self-Releasing Fire and Panic Exit Latches

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It is with panic devices.

The new series genuine Type "B" Von Duprins, for example, cost somewhat more to buy. It is expensive to build as we build these devices—with the best materials we know and with every working part tremendously overstrength.

But during the life of the school building, this higher first cost is far more than offset by the almost complete elimination of upkeep expense.

To secure these superlatively fine devices, ask your archi-

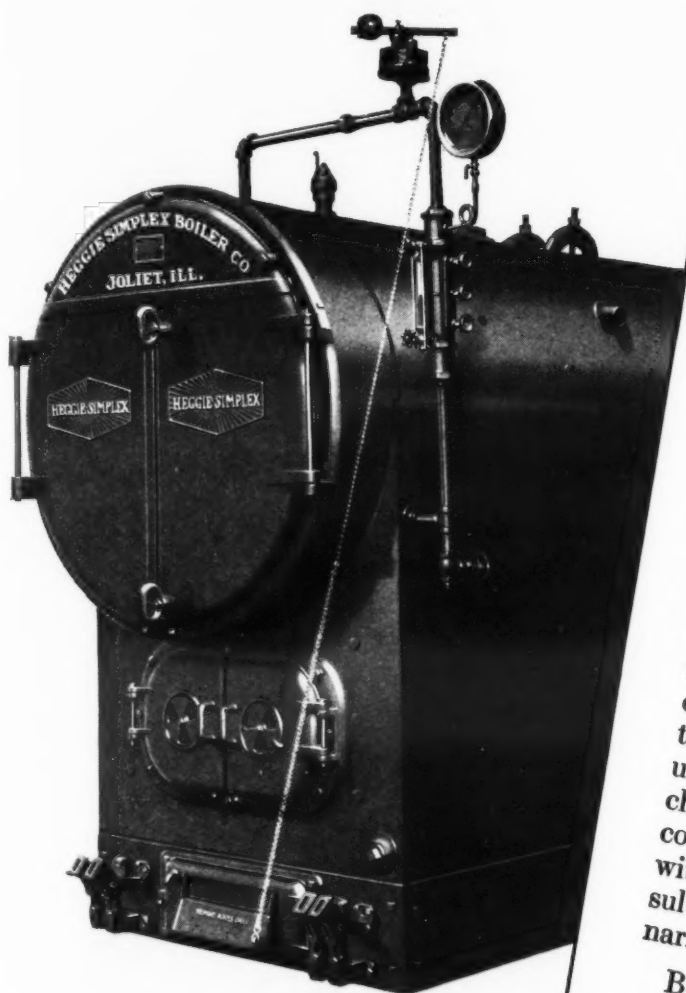


tect to specify them separately from the finishing hardware and, of course, by name. Thus you foster clean competition, since all reputable dealers can buy these devices at the same fair prices.

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Indianapolis, Ind.

Listed as Standard by Underwriters' Laboratories

HEATED FOR 10¢ Per Sq. Ft. of Radiation



WITH coal at \$5.50 per ton, Heggie-Simplex Boilers heated the Board of Trade Building, one of Kansas City's largest office buildings, at a cost of only ten cents per square foot of radiation, per season.

Heggie-Simplex Boilers are constantly setting new records for low cost operation. Their advanced design assures more thorough combustion of fuel and utilization of its heat than is possible in ordinary heating boilers. The fire box is extra large—giving fuel more room to burn. There is more heating surface in direct contact with the fire—transferring the heat faster and more efficiently. Flues carry the gases twice the length of the boiler and strip them of all usable heat before they reach the chimney. Water, free to circulate, conveys the heat to the outlet without the losses which always result when water is forced through narrow passages.

Built of steel, fused by electric welding into one seamless unit, Heggie-Simplex Boilers are crack-proof and leak-proof. No shut-downs! No costly repairs!

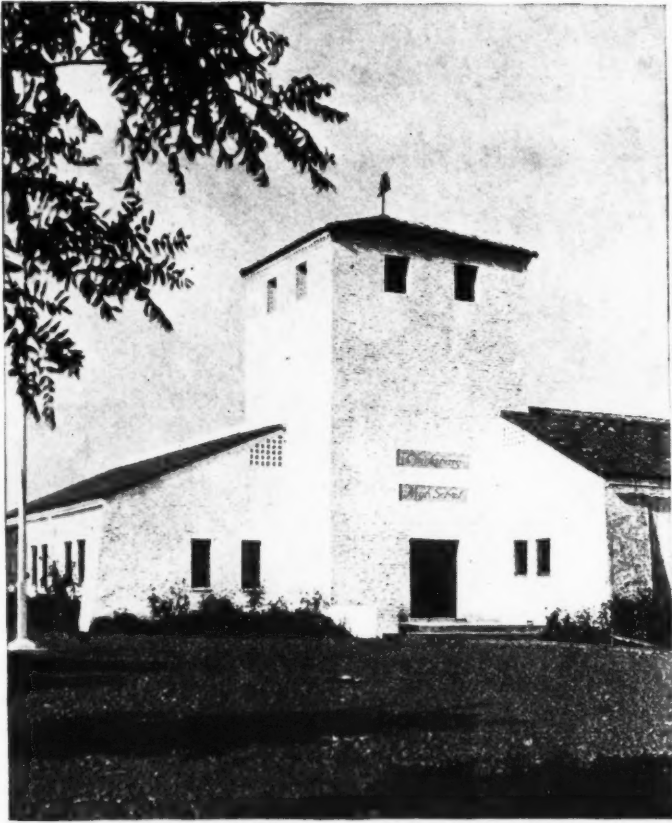
Heggie-Simplex Boiler Company, Joliet, Illinois. Representatives in principal cities—telephone and address listed under "Heggie-Simplex Boilers."

MEMBER STEEL HEATING BOILER INSTITUTE.

HEGGIE-SIMPLEX

STEEL HEATING BOILERS

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Clarksburg High School . . . Dean & Dean, Architects
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Common Brick provides:

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2. Low Cost
3. Permanence
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7. Minimum Supervision in Building

These qualities that can only be had in brick have made it the preferred material for school buildings.

The Common Brick Manufacturers Association offers through its district offices an engineering and consultation service without charge to any locality interested in school construction. If there is no district office located in your city write to the address given below. A brick engineer will advise you without cost or obligation.



COMMON BRICK MANUFACTURERS ASSOCIATION
of America

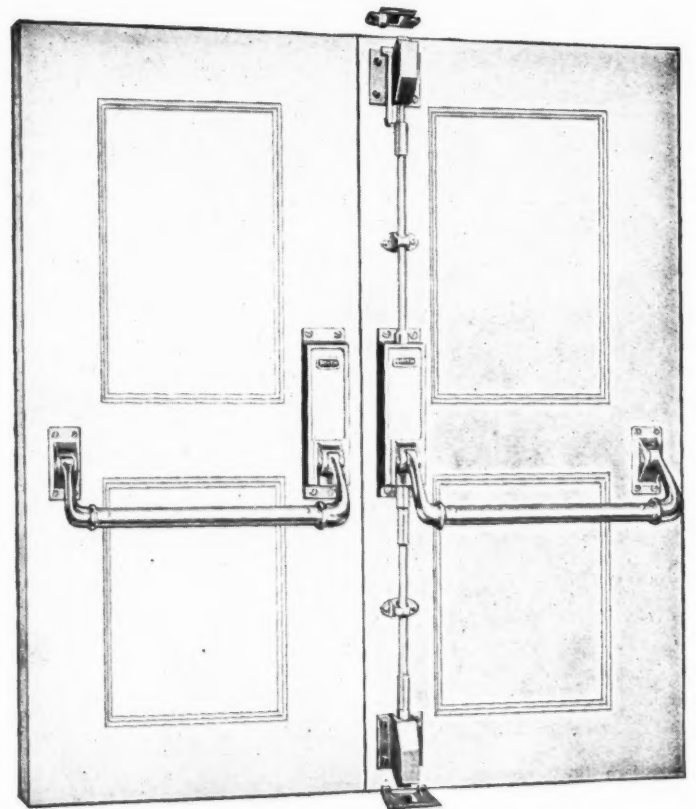
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NO. 80 LINE

Gravity Panic Exit Bolts



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Has Outside Trim.

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No Outside Trim.

Bolts are operated by a slight pressure on the Cross Bar.

Bolts are not dependent on springs for opening or closing operation.

Simple but sturdy in construction and easily installed.

Will operate perfectly in connection with standard makes of door closers.

Catalogue No. 30 with Supplement "A" sent on request.

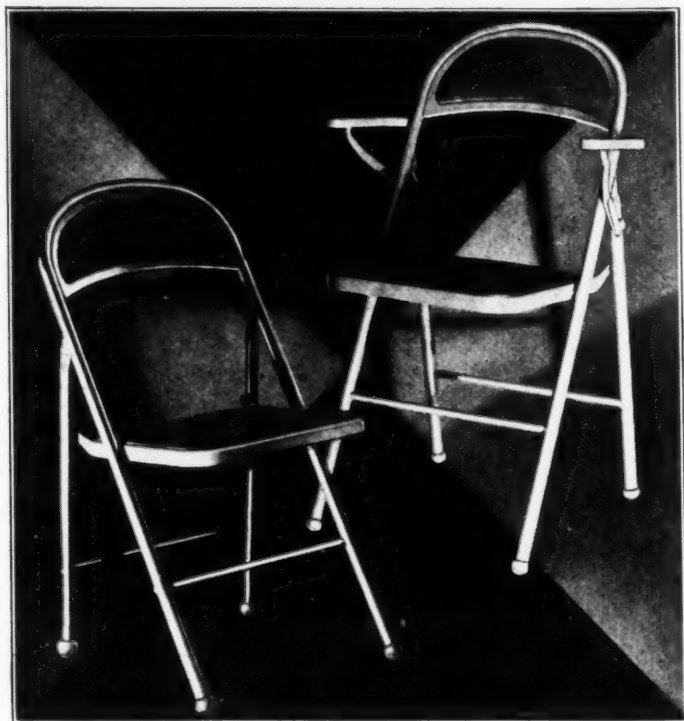
Manufactured by
THE STEFFENS-AMBERG CO.
260-270 Morris Ave.
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OUR CONTRIBUTION TO THE ART OF HEATING AND VENTILATION

The Herman Nelson Wedge Core Radiator is an exclusive feature of all Herman Nelson Heating and Ventilating Products and accounts for their satisfactory performance. + + + +

THE HERMAN NELSON CORPORATION MOLINE
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FINE in appearance, sturdy in construction, quiet and perfect in operation, LYON FOLDING CHAIRS OF STEEL commend themselves to school boards because of their economy. With arms or without, these chairs are handsomely upholstered in *durable, washable* fabrics in many color combinations.

Tubular steel, cross braced, guarantees rigidity. Only three moving parts with pinch-proof hinges to eliminate complaints of torn apparel and squeezed fingers. When folded for stacking, Lyon Chairs lie flat to less than two inches.

There's nothing finer made for school use, and there's nothing cheaper on the market when true economy and long and satisfactory service is considered.

Study our fully illustrated, descriptive catalog which, of course, will be sent without cost. Write today.

LYON

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Converters of Sheet Steel into Practical Conveniences
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Branches, Jobbers, and Dealers in All Principal Cities

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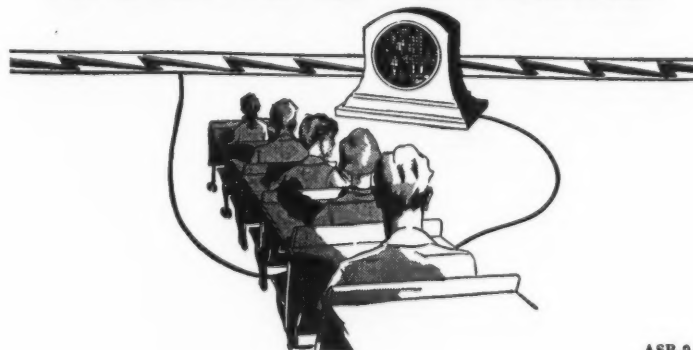
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Many so-called "backward" school children are not backward at all, but simply handicapped by improper lighting—*unbalanced* lighting. Balanced Lighting weighs the advantages, for a given purpose, of all types of fixtures and glassware. It determines proper application

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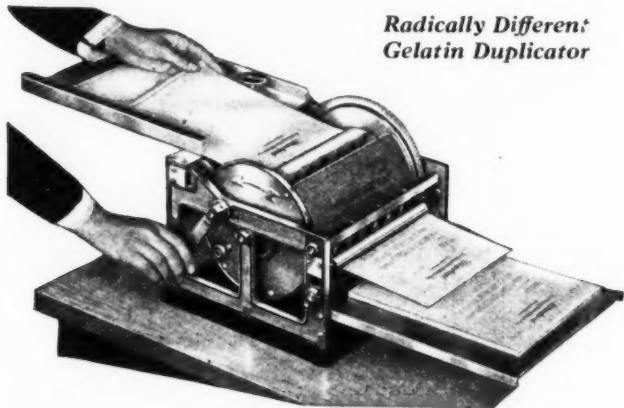
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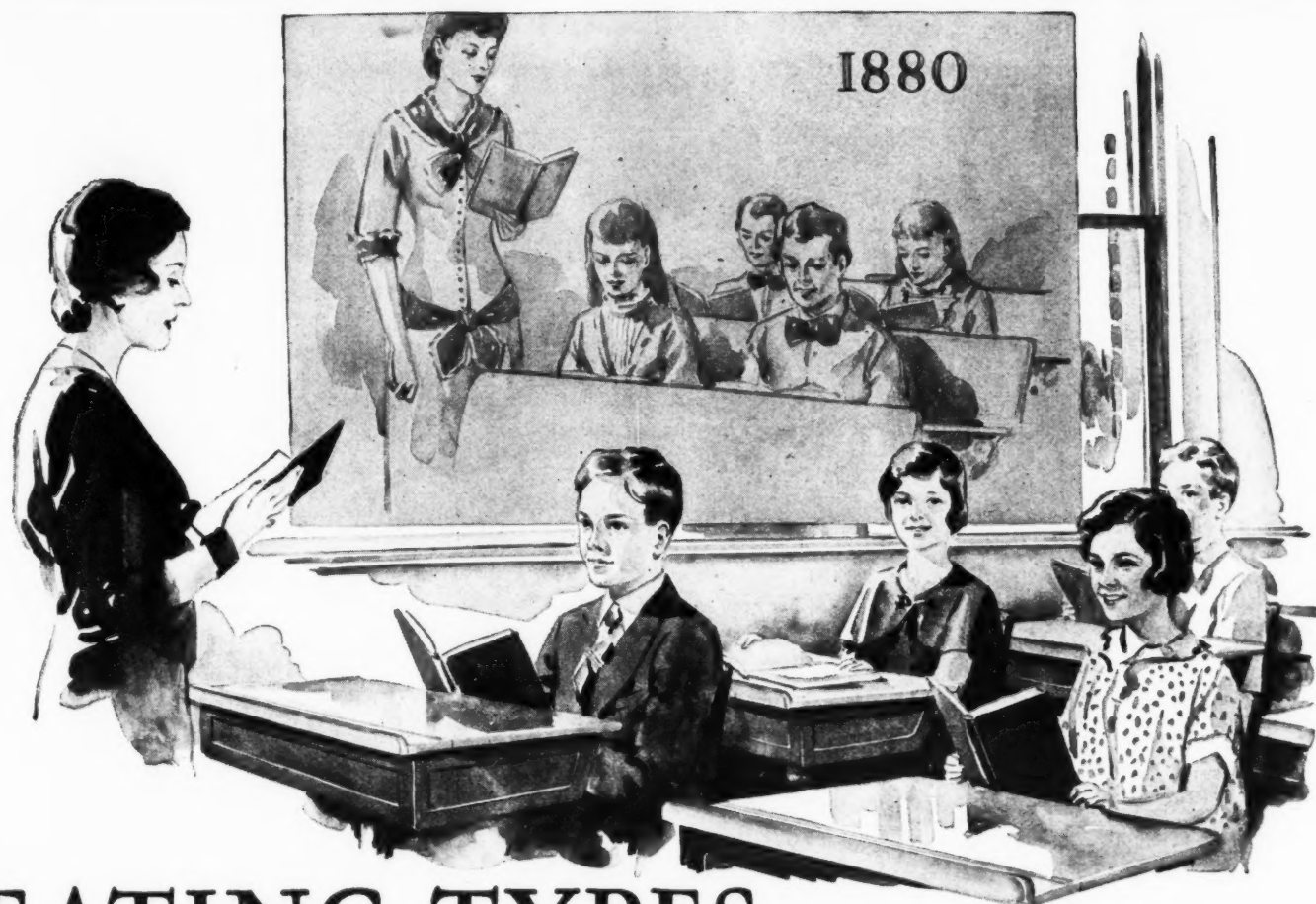
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that go back 50 years, take 25 years off of teaching progress

IN the old days of school benches and poorly equipped teachers, it is true that pupils made progress. But it was as much the scholar as the teacher and the school . . . those who were determined to progress learned regardless of the inefficiency of teaching methods and teaching equipment.

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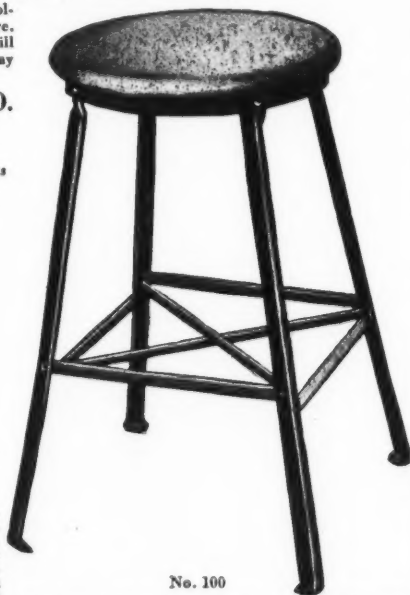
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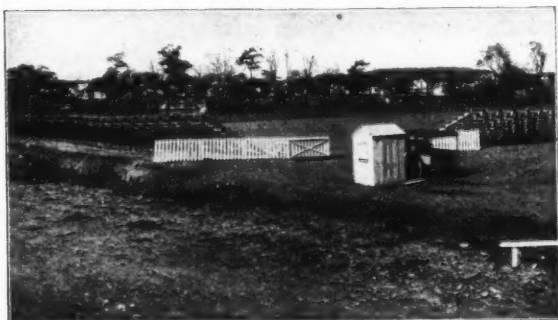
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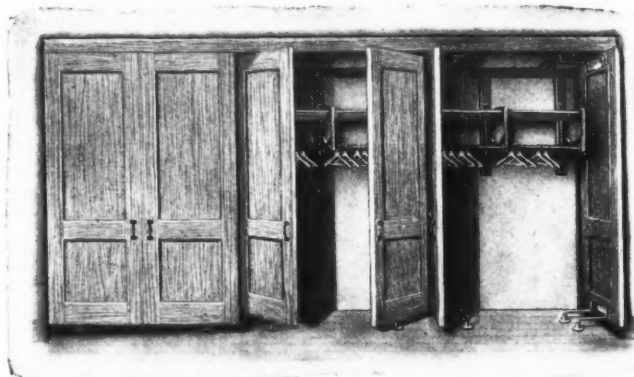
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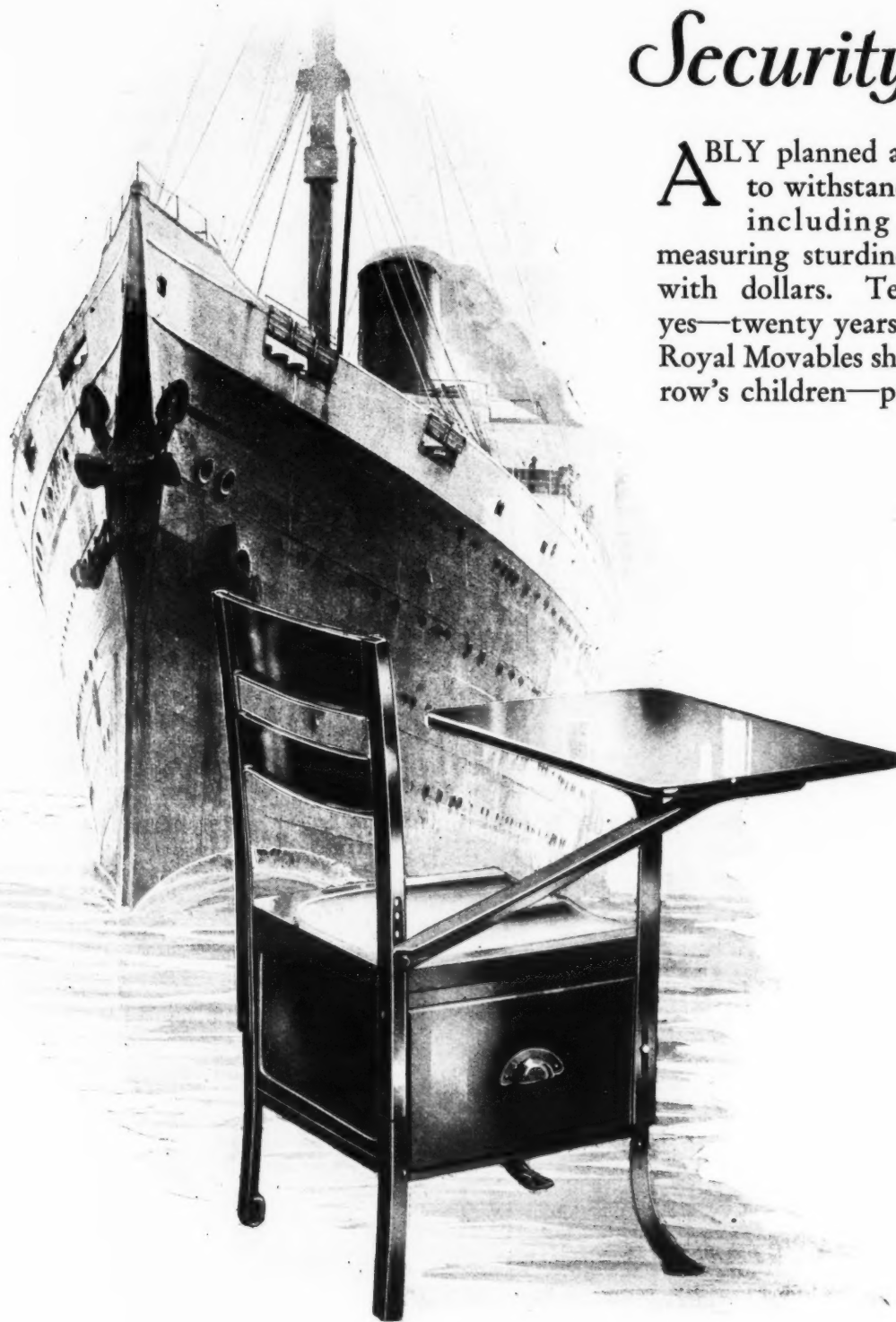
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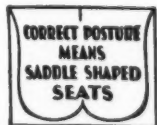
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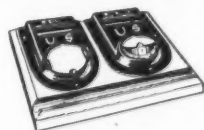
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to all men of whatever
state or persuasion”***

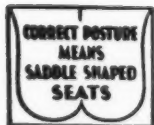
— Thomas Jefferson



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Noiseless rubber or glider feet. Supplied singly or in sections of two or more chairs, as required.

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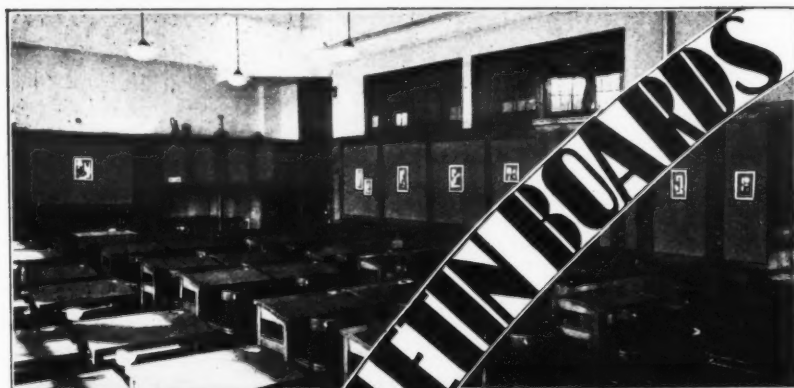


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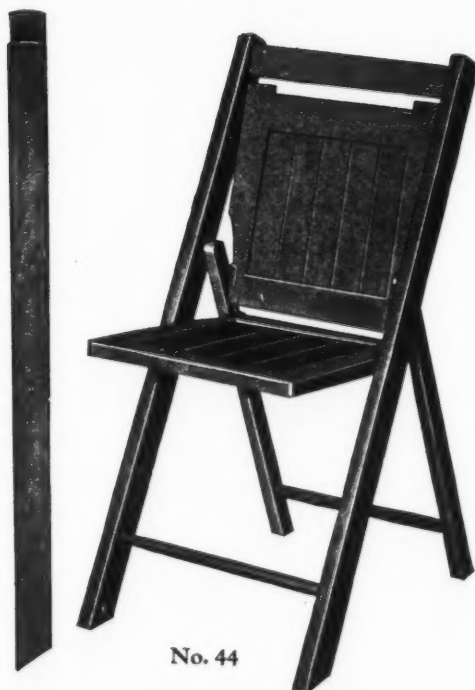


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This chair will meet the requirements of the most critical buyer, therefore, is recommended for those desiring the very best in folding chair construction and comfort.

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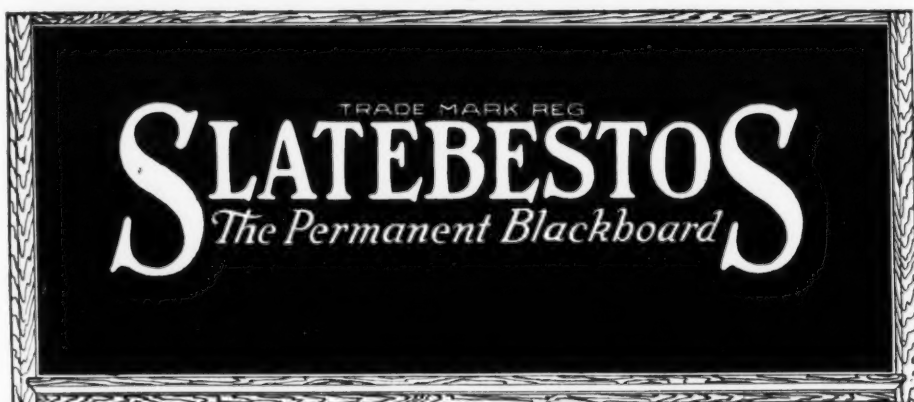
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Boston Inkwell



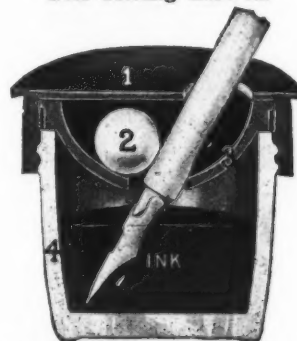
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SQUIRES INKWELL COMPANY

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Finish is an Element of Value in the IDEAL FOLDING CHAIR

CLARIN CHAIRS are made of steel (excepting seat and rubber floor contacts) and will not mar the finest floor nor damage the most delicate floor covering.



THE PERFECT (JUNIOR) CHAIRS

A comparison of this feature is invited
Let us send a sample — Mail the coupon !

The IDEAL should be investigated carefully.

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Please send by parcel-post prepaid—sample ☐ (Senior) CLARIN CHAIR, finish and seat as checked:
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The Rowles line of blackboards offers three distinct products, each designed to fill a particular need of price and purpose, yet all having the same smooth, velvety surface that is characteristic of Rowles blackboards.



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DUROPLATE blackboard is considered one of the most reliable wood fibre blackboards obtainable. It is adapted for use in any building, permanent or portable. It makes an excellent blackboard for general use, temporary classrooms, Sunday Schools, nursery rooms, kindergartens, conference rooms and for lecture purposes, bulletin boards and many other uses, too numerous to mention.

Modern manufacturing equipment, volume production methods and 31 years experience in manufacturing blackboards assures uniform quality, lowest prices, prompt shipments and maximum service and satisfaction.

Rowles blackboards merit investigation and careful consideration. Samples, prices and details upon request.

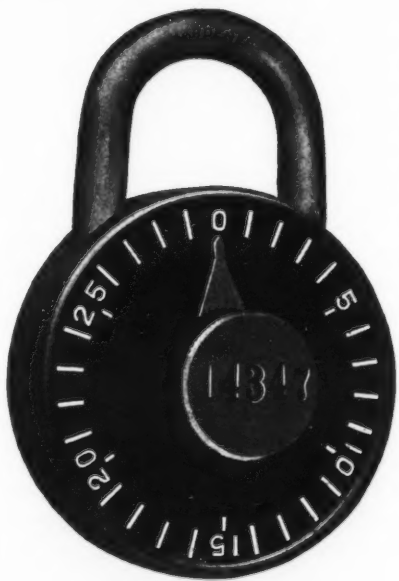
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BARRETT KEYLESS LOCK

The absence of springs and the fact that it cannot be turned back onto combination after it has been locked, nor turned off combination while open, and its entire rustproof construction, combined with a number of other advanced features, give the Barrett Keyless Lock the stamp of SUPERIORITY.

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Barrett Keyless Locks are furnished with standard black and white dials, as illustrated, or with dials containing school colors when requested.

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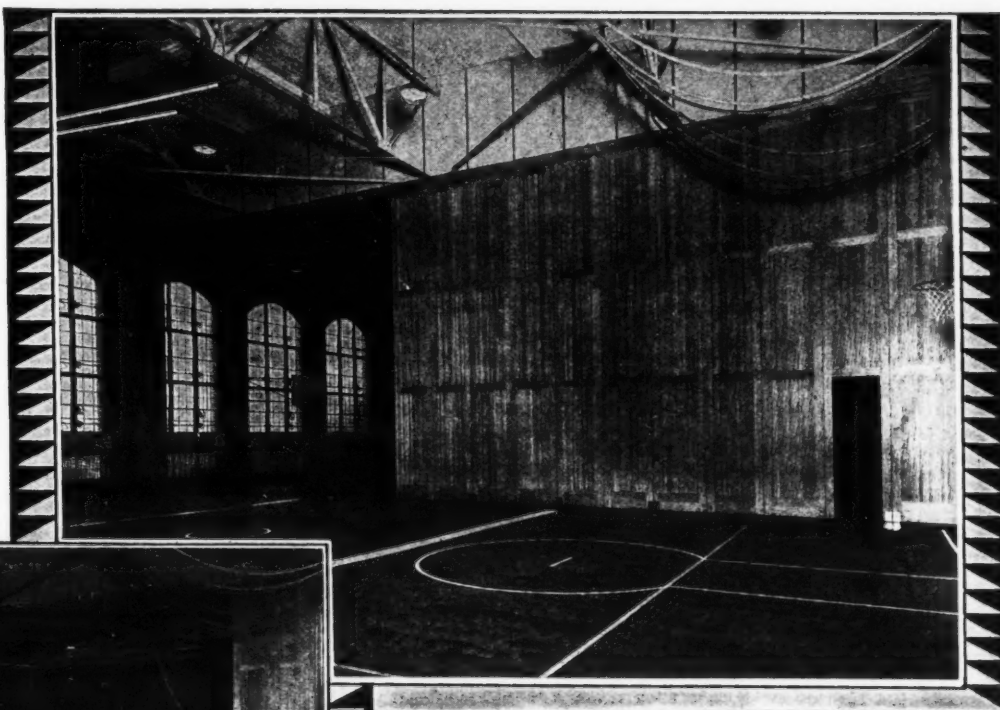
Wilson

SECTIONFOLD

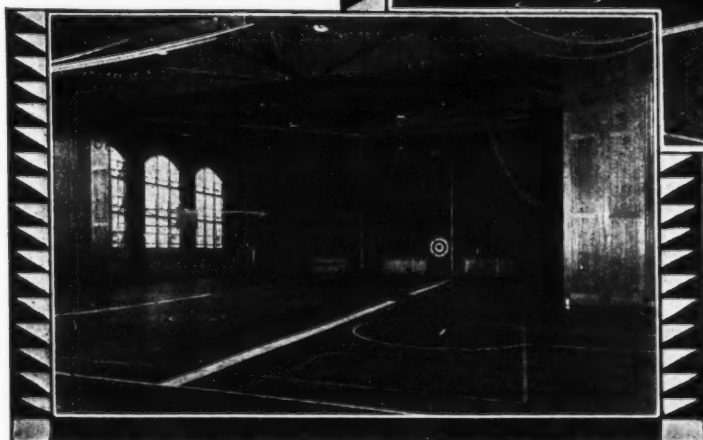
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WILSON SECTIONFOLD PARTITIONS in
"Gym", showing partial sub-division.



SECTIONFOLDS being moved back to open up entire floor space.
Note, at left, how little space is required for SECTION-
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Other Outstanding Advantages

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5. Woodwork and hardware all products of our own factory, and all of best quality obtainable.
6. Five year guarantee with each installation.

WILSON SECTIONFOLD PARTITIONS divide off Gym at will—all separate rooms for handball, squash, individual exercises and wrestling—without interference from indoor baseball or basketball.

For big games, all partitions fold quickly out of the way, allowing use of entire floor space for players and spectators, instead of space being "cramped" by permanent walls of small rooms. Therefore, more efficient as well as more economical than permanent walls.

Doors are usually 3 inches thick, with flush surfaces, both sides, avoiding deflection of basketballs, handballs, etc., and preventing injury to players thrown or falling against partitions.

SECTIONFOLD PARTITIONS are also used to sub-divide auditoriums. In new construction, the modern way is to use SECTIONFOLDS for classroom walls. At will, all classrooms may be converted into one large room, avoiding expense of separate Assembly Room.

Made by pioneers in the field. When you specify Wilson Sectionfolds you run no risk of dissatisfaction such as might occur in the case of products which have not been tested and proven during long years of use.

Full details and illustrations showing how SECTIONFOLDS increase gymnasium and classroom facilities of modern schools are shown in our catalog.

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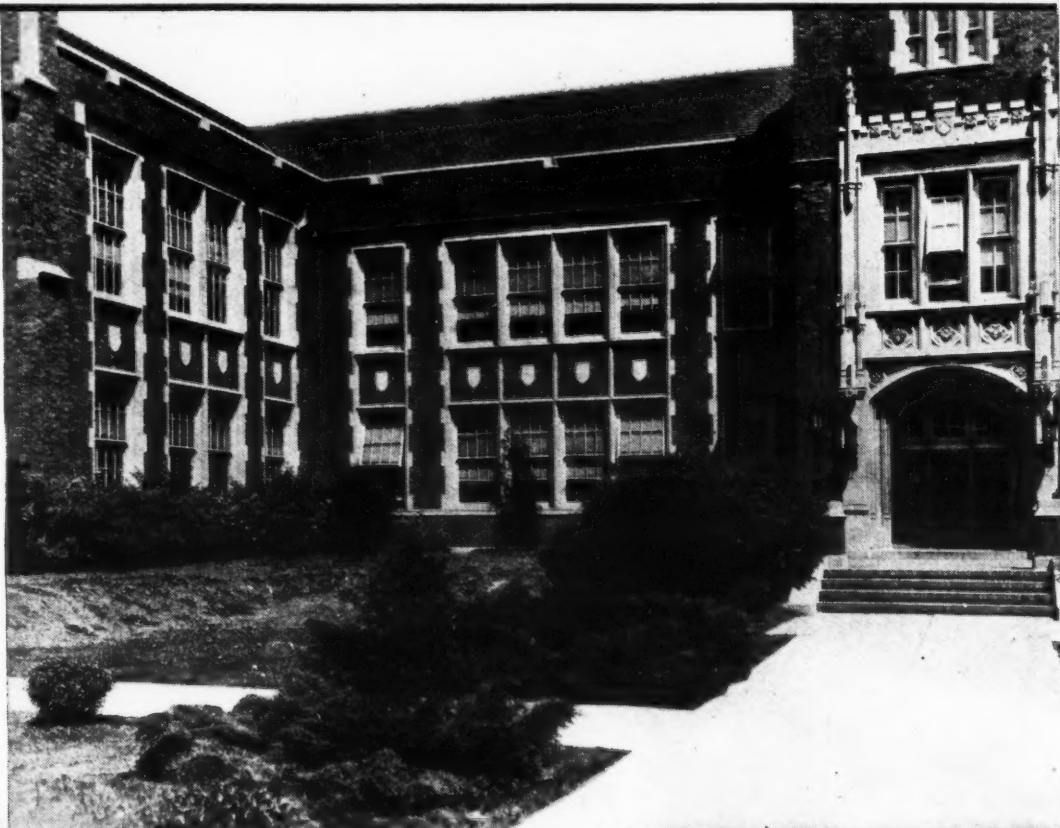
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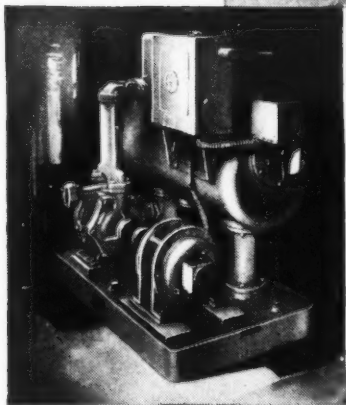
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Furnished in capacities of 4 to
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serving up to 300,000 sq. ft.
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for Bulletin 85.

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Jennings Pumps

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VOL. 81
No. 3

THE AMERICAN School Board Journal

SEPTEMBER,
1930

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Ready for Business!

The nation's schools are open again. Twenty-five million pupils will enter and receive the offerings of a beneficent government. Everything is in readiness for the reception of the school child.

This simple statement, however, implies that many minds and many hands have been at work for months to put the schools in presentable condition and provide the preliminaries here involved. The vacation months have been busy months as far as the school administrators are concerned.

School administration is a sort of continuous operation. While pupils and teachers have an eight-, nine-, or ten-months' school term, the administrators have a twelve-months' term. It is like the housewife's task. It is never quite done.

It must be said to the credit of the American school administrator that he is on the job. When the schools open for the autumn term it is found that the teaching staff is ready to go into harness again, the school grounds and school buildings have been renovated, the stock of supplies has been replenished—the plant is in readiness to serve once more the army of school children.

In many communities new schools will be thrown open to the school constituency. In many more the boards of education have employed the summer months in cleaning and improving the old structures. Quite a number of boards made extra appropriations of funds in this direction as a contribution to the employment situation.

Thus it is safe to say that the hundreds of thousands of schools which have been opened with the autumn season throughout the country have never been cleaner, safer, and better equipped than now. They stand as a tribute to that American genius which recognizes an efficient administrative body as a prerequisite to efficient schools.

The Editor.

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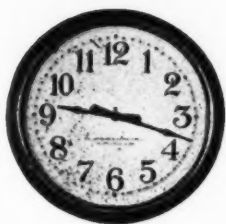
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Discontinuance—Notice of discontinuance of subscriptions must reach the Publication Office in Milwaukee, at least fifteen days before date of expiration. Notice of changes of address should invariably include the old as well as the new address. Complaints of nonreceipt of subscribers' copies cannot be honored unless made within fifteen days after date of issue.

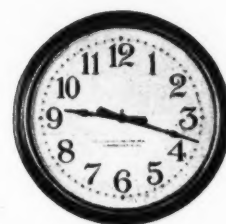
Editorial Material—Manuscripts and photographs bearing on school administration, superintendence, school architecture, and related topics are solicited, and will be paid for upon publication. Contributions should be mailed to Milwaukee direct, and should be accompanied by stamps for return, if unavailable. Open letters to the editor must in all cases contain the name and address of the writer, not necessarily for publication, but as evidence of good faith.

The contents of this issue are listed in the Education Index.

Fortunate Are The Schools Opening This Month



WITH STANDARD ELECTRIC TIME SERVICE



They will be operated efficiently and smoothly throughout the year with entire freedom of anxiety or confusion to pupils or teachers as far as the program schedule is concerned.

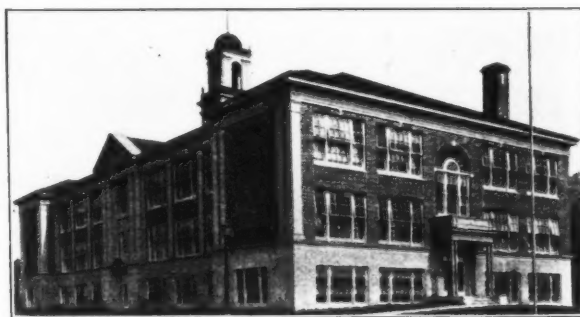
The wonderful synchronized time service with automatic bell ringing of the Standard Electric System makes this desirable result possible.

Standard Fire Alarm Equipment gives thorough fire protection. Parents feel safe when school buildings are equipped with the reliable "STANDARD" Fire Alarm System.

The "Standard" Telephone Service saves the time of teachers and principal; improves the efficiency of every school and saves its cost many times over.

"Standard" Laboratory Panels furnish the important connecting link between the current supply and the experimental tables.

They make possible the teaching of electricity in its varied forms with ease and efficiency.



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Cleveland, Union Trust Bldg.
Columbus, 83 South High St.
Dallas, Mercantile Bank Bldg.
Denver, 562 Pennsylvania St.
Detroit, Donovan Bldg.

Kansas City, Mo., Mutual Bldg.
Los Angeles, 124 West 4th St.
Minneapolis, McKnight Bldg.
New York City, 50 Church St.
Philadelphia, 1612 Market St.
Pittsburgh, Bessemer Bldg.

Portland, Ore., 65 First St.
San Francisco, 1 Drumm St.
Scranton, 148 Adams Ave.
Seattle, 1714—1st Ave. So.
Spokane, 110 S. Cedar St.
Tampa, 5505 Central Ave.

"STANDARD MAKES EVERY MINUTE COUNT"

1930

THE AMERICAN School Board Journal

Founded March, 1891, by WILLIAM GEORGE BRUCE

Volume 81, No. 3

SEPTEMBER, 1930

Subscription, \$3.00 the Year



THE TRUE OBJECTIVE OF POPULAR EDUCATION!

Clearfield's School Adventures—I

Mark Wright, Member, School Board, Clearfield

Last night, we elected a new superintendent of schools.

Recently, our school superintendent resigned, to enter what he called "a larger field of service elsewhere." As a member of the school board, I voted to accept his resignation, because I disagreed with his implication. I agreed with Sam Jones, our school-board chairman, who said: "No field offers larger opportunities for service than that of education, especially in Clearfield."

As our state directory explained last summer, "Clearfield is a suburban town of about 8,000 population. It has no factories. It specializes in homemakers who work in the neighboring city." Clearfield, in other words, is one of the city's bedrooms. But, Clearfield wants good schools.

This accounts for the fact that we did not wait for applications to come in to us, but wrote immediately to our state department of education for recommendations of likely men. We knew that applications aplenty would come after the metropolitan papers carried the story of our superintendent's resignation. And they did — 61 in eight days, from at least four states. They hunted all nine school-board members. Some of them visited us in our offices by day, and others visited us in our homes by night. All were anxious, some pitifully anxious, to serve the Clearfield schools.

Then, Sam Jones took advantage of his prerogatives as chairman and called a special meeting of the school board to discuss the situation. Several board members favored burning the midnight oil in order to study carefully the stack of papers left by the various applicants. But, Sam said, "Ladies and gentlemen, do we want a man who can afford to steal time from his job to hunt for another? Let's search for the

man who is too busy to spend time running after every vacancy in his own and neighboring state. Let's visit a few such men at work. What do you say? We elected immediately a committee of three, Sam, Mrs. James, and myself. Then, we adjourned for one week.

The next morning we three started our hunt. The state department had suggested three names. We visited all three. One of these men, Winston Graham by name, was earning already as much as our board had agreed to pay. But, he had the respect and confidence of his community and teaching force. We noticed that parents, teachers, and school-board members alike talked confidently and enthusiastically about his five-year program for the school system. Much had been done. This situation stood out in strong contrast to the pleas of many candidates who talked about their work being completed in their present bailiwicks and who were, therefore, seeking larger fields to conquer.

Somehow, this man appealed to us. His experience was sufficient. His professional training was excellent. He explained his educational program modestly, yet confidently. He was hailed locally as a real educational leader. unanimously, we agreed to recommend him to the full board, at a salary \$500 in excess of the amount originally considered adequate.

Every member was present when the next meeting was called. We three made our report. It was accepted unanimously, partly because of one paragraph in our report taken from a letter of recommendation which described Mr. Graham as "a man with the courage to face the facts and to make decisions; willing to stand up and take the garbage or the garlands."

And so Winston Graham was elected our new superintendent of schools.

their children's education that they earn the money for their higher education. . . . This court will not hold that it is the duty of a parent to provide such education, under the guise that it is a necessary. . . .

"Whether it is the legal duty of a parent to furnish his minor child means with which to procure educational training, in preparation for a chosen vocation for which the child has a peculiar aptitude, is not involved in this case and need not be considered. We conclude that . . . the trial court was without authority of law to require the plaintiff to provide funds to defray the expenses of a general college education for his son, . . . (170 N.E. 386).

So much for that case, and now let us turn to another of this kind, which arose under somewhat different circumstances, though the same question was involved. In this case, an action was brought to compel the father of a minor to pay certain expenses incurred by the minor in procuring a college education, on the ground that the latter was a necessary. After first holding that a common-school education is a necessary, the court continued:

"But, it is obvious that the more extensive attainments in literature and science must be viewed in a light somewhat different. Though they tend greatly to elevate and adorn personal character, are a source of much private enjoyment, and may justly be expected to prove of public utility, yet in reference to men in general they are far from being necessary in a legal sense. The mass of our citizens pass through life without them.

"I would not be understood as making any allusion to professional studies, or to the education and training which is requisite to the knowledge and practice of mechanic arts. These partake of the nature of apprenticeships, and stand on peculiar grounds of reason and policy. I speak only of the regular and full course of collegiate study. . . ." (42 Am. Dec. 537.)

So, too, in another recent case, an action was brought against two students of Harvard College on a lease of a suite of rooms in a private dormitory. In defense the students set up that they were minors and not liable under the contract. In reply, the plaintiff contended the lease was entered into for a necessity, and as such avoided the usual rule in respect to the liability of minors for their contracts. In denying this contention, and in refusing to enforce the contract the court said:

"The ruling 'as a matter of law that a college education is not such a necessary . . . as to take the contract out of the rule relating to infants' was proper. This was, in substance, a ruling that the facts found did not warrant the conclusion that a college education was a necessary for either defendant for which he could make a binding contract. Under present-day conditions, . . . a college education is not, as matter of law, a necessary, though very likely circumstances could be shown which would warrant that conclusion as matter of fact . . ." (170 N.E. 477).

Conclusion

It will be noted that the foregoing cases relate to a general college education, as distinguished from higher training of a technical nature with a view to the practice of a particular vocation. For some courts have upheld training of the latter kind at the expense of parents, on the ground that it was a necessity, and in the cases reviewed this limitation on the holdings is pointed out, or at least mentioned.

However, the foregoing cases constitute a valuable cross section of the case law on the subject, and the holdings announced unquestionably represent the weight of authority thereon. This authority takes the position that a general college education is not such a necessity, as matter of law, as to render a parent legally liable therefor.

The Legal Duty of College Education

Leslie Childs, LL. B., Indianapolis, Ind.

The question of the legal duty of parents to furnish their minor children with college educations, on the ground that such training constitutes a necessity, has been before the courts upon a number of occasions. But, since each case of this kind has necessarily been decided in the light of its particular facts, the subject cannot be covered by any hard-and-fast rule.

However, while some courts have upheld the right of a minor to higher education as training for a vocation for which the child was shown to have special talent, the great weight of authority appears to have taken the position that a general college education is not a necessary. The application of this rule, and the reasoning upon which it is founded, may be illustrated by a brief review of a few decided cases of this kind. For example:

Parent Objects to Providing Funds

In one recent case of this kind, the plaintiff was ordered by a court to pay the sum of \$50 per month for the support of a minor child. Plaintiff paid this amount for seven years, at which time he filed an action for relief from further payments to the minor, on the ground that the latter had reached the age of 17 years, was physically and mentally strong, a graduate of a state high school, and was well able to support himself.

In reply to this, the minor who appeared with his legal representative, argued that he desired to enter college to complete his education, and that the \$50 per month was necessary to meet

this expense. It was further alleged that, if the plaintiff was relieved from further payments, the minor child would be unable to enter college, and would be compelled to go to work.

In this case, there was no question as to the financial ability of the plaintiff father to continue to make the payments, and the sole question raised was whether the plaintiff owed a legal duty to furnish the minor a college education as a necessity. In reasoning on this, the court said:

The Language of the Court

"It is fundamental that the legal duty of a father to provide for his minor child is confined to necessities. . . . That a common-school education is a necessary to which a child is entitled at the expense of its parent is not controverted . . . nor can it be. . . .

"A general college education, however desirable it may be, is not a necessary. The holding of a court of review that it is, might make it the law within the court's jurisdiction, but it would not change the fact. It is well known that there are worthy parents in all parts of the country, with sufficient means to do so, who do not send their children to college. We cannot say that each of them has failed in a legal duty to his child and to the state.

"It cannot be doubted that the important part of the education of a young man or woman is the building of his or her moral character, and not higher learning, desirable as it may be. Many parents may conclude that it is best for

The Principalship

W. C. McGinnis, Superintendent, Perth Amboy, N. J.

"As is the teacher so is the school," is a statement whose origin is lost in the dim beginning of educational administration. It probably was made in the era of "the little red schoolhouse." It contained a great deal of truth, and still does. It applies today to some considerable extent even in city schools. But in the little red schoolhouse the teacher was teacher, supervisor, and principal all in one.

Teaching experience, even today, in a one-room rural school is probably the best training that a young beginner can get in developing the qualities of initiative, originality, and responsibility. For the rural-school teacher supervision is remote and periodic rather than near and continuous. Administration is very largely in the hands of the teacher herself. Normal-school and college graduates who have had rural-school-teaching experience find it easy to teach in the city. But many of them find their new positions dull and uninspiring professionally. The reason for this is that in many city schools the classroom teacher has but little occasion or opportunity to develop qualities of initiative and originality. All too often in the departmentalized school her greatest responsibility is subject-matter responsibility.

"As is the teacher so is the school" still applies to some extent in any school system, but in a city system the situation is better expressed by "as the principal so is the school."

The Elementary Principalship

The principalship represents one position, but two jobs. In other words, the principalship has two main divisions. One is administration and the other is supervision. Much of the administrative work of the principal should be routinized. Most of the supervisory work should be definitely planned.

Adequate recognition of the professional importance of the elementary principalship is of recent date. At present there are several good books dealing with the duties, responsibilities, and opportunities of the elementary principalship. Current educational literature abounds in instructive and inspirational material on the principalship. Principals' associations, local, state, and national, have made great contributions to educational progress. Countless numbers of individual principals have rendered services whose influence is permanent. Among the greatest of these is the late Ide G. Sargent of Jericho, Vermont, and Paterson, New Jersey.

The principalship has made such rapid progress in the importance and quality of its work that many educators assume that the principalship is universally meeting the requirements of high standards of accomplishment. Such is not the case. In spite of the advancement in good theory and in the available knowledge of what constitutes good administrative and supervisory practice, the principalship in many city school systems is on a dead level of mediocrity.

Need of Proper Administrative Procedure

"Administration of the school" and "the multiplicity of administrative details" are high sounding phrases which may lead the principal into a rationalized justification of a procedure that neglects a program of supervision in his school. Fifty per cent of a principal's working time is the minimum that should be devoted to a program of supervision.

In connection with some educational research it has been my privilege to study some data on the duties performed by elementary-school principals during the hours school is in session. Many of the duties represent "administrative busy work." That principals do a great amount



of work is not to be denied. Whether the work is worth while, and whether it precludes more important work, is another story. Just a few examples of some of the "duties" performed by one principal for one day tends to show a lack of proper administrative procedure:

1. Investigated complaint about obscene writing in toilets.
2. Interviewed representatives of three publishing houses.
3. Investigated and settled disciplinary cases for four teachers.
4. Made out requisition for pencils.
5. Checked attendance and made out attendance report.
6. Interviewed and reprimanded teacher for leaving lights burning in classroom.
7. Interviewed magazine agent.
8. Collected money from boys for broken windows.
9. Made three telephone calls to superintendent's office.
10. Scored sixth-grade English test papers.
11. Made out arithmetic examinations for fifth-grade pupils.

The above are not all the "duties" listed, but they are a fair sample. Numbers 10 and 11 were the only activities listed that could possibly be interpreted as being a part of a supervisory program. Even if they are so interpreted, number 10 should not be performed by the principal. The responsibility for 2, 4, and 7 probably rests with the superintendent of schools.

The data referred to shows a surprisingly large number of principals who devote only a small amount of the time to problems of supervision. In practice superintendents fail as badly as do principals in the matter of an adequate and definite policy toward supervision. In 1928 the amount of superintendents' time devoted to problems of supervision in cities of 20,000 to 50,000 population¹ in a New England state ranged from 20 to 80 per cent, and for cities outside of the New England state, ranged from 5 to 95 per cent, according to data furnished by the superintendents.

A visit to a meeting of the classroom teachers' organization, whether in the N.E.A. or an individual city, gives a casual visitor the impression that teachers resent supervision. But, a careful study of the situation, reveals that teachers resent the absence of real supervision. The reason why so many teachers do not recognize the value of supervision can be divided into three parts: (1) There is no definite program. (2) Criticism is not constructive and is largely negative. (3) Too many things are handed down to them by supervisors, principals, and superintendents and too few things are developed with them and by them.

The successful principal uses administrative details as his servants. He does not allow them to become his masters. Experience and opinion must give way to experiment and science in administration and supervision. The principal's road to success is rough in places, and at times very steep, but it has been paved with hard

facts by scientific researchers, swept clean of eye-filling dust by eminent psychologists, and lighted with ideals by patient philosophers.

The principal must understand the difference between administration and supervision. He must have a theoretical and practical knowledge of the proper inter-relationships among all the workers in the school system. He must stop fussing with the "busy work" of administrative details and devote his time and ability to the larger problems of educational outcomes through supervision of learning.

Maintaining the Highest Type of Efficiency

Any fair-sized school has enough unused surplus ability in the teaching corps to insure a decided increase in the quantity and quality of educational outcomes through a definite program of supervision.

School administration is not something that can be carried on by rules, regulations, and orders. The highest type of efficiency is that which recognizes human relationships. School teachers, like other people, work for a living, but if their work is to count as a distinct contribution to the welfare of mankind, there must be a real liking for their work and a pride in individual and group accomplishment. Service of head and hand can be bought and paid for, and the return for the money paid will be a fair day's work. But the surplus of service, the loyal coöperation, and the desire to do good work as individuals for the benefit of the whole school and because of a group pride in the school—these things cannot be bought and paid for in dollars and cents. This type of service cannot be commanded through rules and regulations of the administrative organization, but no organization can properly be termed "efficient" in the best sense unless this kind of service is the dominating influence of the organization, and this is democracy.

"The child centered school," "creative education," "learning by doing," "an activity program," "projects," "socialized procedure" and "coöperative groups" are all phrases that form familiar parts of the professional educational vocabulary of administrators and supervisors. They are supposed to be parts of informal educational procedure. If it be required that all primary teachers in a given school shall stress creative education, or teach through an activity program, doesn't the requirement itself make the procedure formal? Formality may or may not be a good thing. But, let us stop deceiving ourselves, with the idea that a superimposed procedure of any kind isn't formal whether it is the Winnetka, the Dalton, or any other plan.

Learning by doing and activity leading to further activity represent good educational psychology and good educational philosophy. Administrators and supervisors recognize the value of these two things in the educational processes of the classroom as applied to pupils. Many of us fail to recognize their value in solving administrative and supervisory problems.

Increasing Teaching Ability

Teaching ability is composed of several parts. Training and experience in terms of years are the ones that receive most consideration not only in salary schedule making, but also in teacher assignment. "Years of training" sometimes has very little relation to teaching ability. Experience may, or may not, add to the sum total of a teacher's teaching ability. Whether it does, or does not, depends to a large extent upon the educational philosophy of the superintendent.

¹McGinnis, School Administration and Supervisory Organizations in Cities of 20,000 to 50,000 Population. Bureau of Publications, Teachers College, 1929, pp. 39-42.

ent and to a very great extent upon the educational philosophy of the principal.

Initiative, originality, and an understanding of the problems of the school are also parts of teaching ability. Teaching experience in a school in which the initiative and originality of the teacher are held in check by rules and regulations tends to lessen rather than to increase teaching ability. Poor supervision is worse than no supervision. Supervision that is subordinated to a petty round of the principal's administrative busy work is sure to be poor supervision. Many principals (and superintendents, too) need to apply their educational psychology and philosophy to problems of administration and supervision.

"Learning by doing," "activity leading to further activity," and "coöperative group work," etc., are just as important in the case of the teacher in her relations to the school as they are in the case of the pupil in his relations to fifth-grade arithmetic.

Initiative, originality, and understanding of problems cannot be handed down to teachers. They can come only through a purposeful participation in the study and solution of problems of curriculum revision, selection of textbooks, time allotment, and other things related to the

BASIC FINANCIAL POLICIES¹

Four basic principles summarize public educational finance policy: (1) Money should be expended through the guidance of a budget prepared in the light of detailed facts; (2) all finances should be accurately and completely accounted for through a system designed to show costs as well as use; (3) the facts concerning expenditures should be given the public in printed form so written and arranged that the layman can grasp them; the classifications of the financial report should be uniform for all public schools, colleges within the state, and a national classification would be of great service; (4) institutional needs and expenditures should be constantly under investigation in order that adequate, detailed, impersonal data may be available upon which to base legislative requests and internal finance policy.

¹From *Equity of Chance*, A.&M. College, Stillwater, Okla.

administration and supervision of the school. Only by teacher participation in the study and solution of the administrative, supervisory, and teaching problems of the school can the surplus ability of the teaching corps be used for the benefit of the school.

The Supervision of Instruction in the Small High School

C. A. Weber, Superintendent of Schools, Hume, Illinois

Administrators of small high schools are confronted with a serious problem when they attempt to supervise instruction. There are many reasons for this difficulty. In the first place, the principal of the small high school with less than ten teachers is to a large extent not only the supervisor, but also the chief clerk, the manager of extra-curricular activities, and the school administrator. In most cases he is also a teacher of regular subjects ranging in number from four classes per day in the smaller schools to one in the larger ones. The average number of classes taught is between two and three, with one study hall or assembly period in addition.

The largest task of the principal of the small high school is, by the nature of things, to keep the school running smoothly as well as efficiently through contacts with the local school patrons, the board of education, the faculty, and the students. No small amount of his time is devoted to the first two mentioned, arranging appropriate continuous publicity concerning the school for the local newspaper and other news spreading agencies.

After the principal has taken care of the clerical work for the day, taught two or three classes, helped coach the senior class play, chatted with two or three salesmen, interviewed the editor of the local newspaper, loitered in the drug store where several influential men of the town gather to talk over the affairs of the times—he thinks of the supervision of instruction.

The Principal's Main Job

For part of this he cannot be criticised severely, for he must make personal contact with the community, he must by the very nature of the American people arrange for the proper school publicity, and he must be prepared to talk at any time on any subject to nearly any group of citizens from the afternoon Woman's Club and the Sunday School to the local Commercial Club. The clerical work of the school must be taken care of, and the classes must be taught.

On the other hand, the chief purpose of the principal of the small school should be the improvement of instruction. In some way or other the efficient school man must find a way to

guide and direct his corps of teachers so that better instruction will result. When and how can he do it?

Now the supervision of instruction does not mean inspection of classroom activities, although it includes it. Supervision for the school principal means four things:

1. Assisting, advising and helping the teacher plan her work.
2. Observing the reaction of pupils.
3. Observing the results of instruction.
4. Cultivating a healthy professional attitude.

Too many times the principal is prone to stress the second phase of the work and neglect the first and fourth, which are in reality the vital issues. What is needed in most cases is intelligent personal interviews with teachers relative to the planning and arranging of the units of work.

Interviews and Inspection

If the administrator will arrange regular office hours, at which time he provides for regular interviews with teachers, he will reap a huge harvest of increased efficiency. If, for instance, classes are dismissed at three thirty, let the principal arrange for an hour from three thirty until four thirty, four days per week, in which to talk individually with his teachers. If there are six besides himself, let him arrange a schedule of interviews of twenty minutes each in which he meets each teacher at appointed times at least twice per week.

During these interviews the principal should train and help the teacher in the planning of her pupils' activity, setting up the immediate objectives, arranging learning exercises, planning classroom procedure, and providing for the measurement of achievement.

In the capacity of supervisor the principal cannot fail to remember that he is helping, advising, and guiding rather than "inspecting." His teachers will soon come to feel that they are being helped and will desire more than the regular office hours provide.

When the principal completes the personal interview with the teacher his function as a supervisor has just begun. He has another im-

portant duty, namely, visiting the classroom to observe the technique and improvement of the teacher in terms of pupil activity.

At least once every week the principal should visit each teacher—perhaps for only the brief period of twenty minutes. Upon entering the classroom the principal should quietly seat himself in the rear of the room, where he may be as inconspicuous as possible, to listen and watch carefully. While in the classroom he should be alert to the following things:

1. The physical attitude of pupils and teacher.
2. The physical conditions of the room.
3. The absence or presence of distracting noises, movements, and other activities.
4. The conservation of time.
5. The ratio of teacher-pupil activity.
6. The adherence to the lesson plan.
7. The appropriateness of learning exercises.
8. The evidence of student preparation.
9. The assignment.
10. The general atmosphere of the classroom.

Follow-up on Inspection

After leaving the room the principal should immediately go to his office and amplify and complete his notes, making a carbon copy for the teacher. These notes, then, should be carefully studied by the supervisor for the purpose of suggesting improvements during the next personal interview.

By the employment of standardized tests and carefully worked out quizzes and examinations the teacher and principal may measure the results of instruction. They can thereby determine whether the activity of the pupils has been adequate and balanced. Principal and teacher should check papers to determine whether or not there has been an overemphasis of specific habit formation and a lack of knowledge activity. (Knowledge as here used means the ability to solve the new problems in situations by the use of habits previously formed.) The attitude of pupils toward the classwork can easily be observed by occasional conferences with representative pupils, although this must be done indirectly to avoid misunderstanding.

Upon the personality and teaching ability of the principal rests the burden of cultivating a healthy professional attitude. Once he has won the confidence of his teachers, both as an administrator and helpful supervisor, the principal can by suggesting suitable books and magazines cultivate a growing interest in teaching as a profession.

All this implies that the principal himself must be an efficient, patient, and above-the-ordinary teacher. And why not? Teachers in the average small schools are inexperienced and are usually lacking in professional training of a specific nature. If they come in contact with an experienced and efficient as well as sympathetic teacher in the person of their principal, will they not profit by the experience?

It Pays Dividends

Too many times we are likely to think that our teachers dislike supervision—we are wrong, but they do dislike the type of supervision which finds faults and errors and perhaps good points, but does nothing to improve the teachers professionally. In this a teacher cannot be blamed, for she is not in need of merely knowing her weak and strong traits and techniques but also in determining why she gets results in some cases and how to get results in others. In the hour after school the small school principal can do more in personal interviews twice a week with each teacher than he could spending two hours per day in the classroom. Sometimes it requires a little extra mental fortitude to stick to the schedule . . . but it pays big dividends in time, energy, teacher efficiency and pupil development.

Blackboards: Their Height and Width

H. W. Schmidt, Madison, Wis.

TABLE 1.

THE NUMBER OF PUPILS
WHOSE WRITING HEIGHTS
WERE MEASURED.

GRADE	LOW	MIDDLE	HIGH
1	162	197	197
2	150	155	155
3	180	181	180
4	216	216	216
5	211	211	211
6	176	175	175
7	167	167	160
8	147	147	129
TOTALS	1409	1449	1421

ucators, in fact most, to believe that the need for drill work at the blackboards, especially in the elementary schools, does not exist in the same measure as in the past. Pupils write more often on paper, and even mathematics does not call for as much board practice as of old. In the high schools a similar situation has been found.

Hart and Peterson have made a study of the use to which blackboards in the junior and senior high schools are used, and the authors have come to certain conclusions and made some recommendations which are worth while.² A similar study to determine the use made of these boards in the elementary schools would no doubt prove of interest and profit. No specific data in this direction have been found by the writer.

However, observations for many years have led the writer to the conclusion that, so far as the heights of blackboards were concerned and the space actually used by children, there appeared to be a wide discrepancy between placement and practice.

Standards vs. Use

Strayer and Engelhardt³ in their standards, advocate certain blackboard heights and widths which are given in Table IV in addition to those

²Hart and Peterson, "Economies in Schoolhousing," *Am. Sch. Bd. Jr.* July '26 and May '27.

³Strayer and Engelhardt, "Standards for Elementary School Buildings," Bureau of Publication, Teachers College, Columbia U.

advocated by Dresslar.⁴ In many instances these various heights are accepted as standard and used by many architects. Yet, as stated before, it has seemed to the writer as if these standards were inappropriate, not always meeting demands and that definite economies might be practiced by determining what the space use of blackboards really was, insofar as children of grades one to eight were involved.

At several national meetings which the writer has attended this problem was discussed informally and the opinion expressed that a study might well be made to determine what actually happens when children write at the boards. Among other things even casual observation will show that in nearly all cases the upper portion of the blackboards devoted mainly to pupils' use, is not used so that nearly one fourth of the blackboard is often "virgin" soil.

To determine the actual status of use, the following study was undertaken and the results given herewith. The study covers blackboard use by children of grades one to eight and confines itself to *writing heights* only. The length space used was not involved, nor the time use. These are problems of an entirely different nature and do not enter here.

Data of Present Study

The study was carried on through data obtained, by the author mainly, from 16 schools and 94 rooms, recording the writing of 1,449 pupils. Where two grades were seated in one room a separate count was kept for each grade. In case of a single grade, no separate data for the A's and B's were recorded. In those schools where half grades were seated in one room and another room contained the other corresponding half grade, both rooms were used so as to balance any age or height differences. Where the numbers involved were not too large, the whole room was used; in other cases a random selection was made, though wide divergencies of age and heights were not slighted. It is therefore assumed that the sampling was a fair one.

The total numbers used is given in Table I. It will be observed that the columns do not balance due to the fact that blackboard heights did not always permit all pupils to write either as low or as high as they would under ordinary circumstances. Any writing *directly under or over the molding* was disqualified and that

⁴Dresslar "American School Buildings," U. S. Bureau of Education. 1924—No. 17.

The Use of Blackboards

But there is another side to the matter and that concerns itself with the *use* of blackboards. In many quarters it is claimed that it is not necessary to provide as much blackboard space as in the past; that it is not necessary to place blackboards on three walls of a room. The use made of blackboards may roughly be divided into two activities—those of the teacher and those of the pupils. The former consists of "demonstration work," assignments, etc. The latter of practice or drill work. In the ordinary course of events the front board is mostly used by the teacher; side and rear boards are most frequently used by the children. In some cases the newer types of "swinging" boards are used to economize space and for various other reasons which need not be gone into here.

Our newer teaching technique and increased knowledge of mental processes has led many ed-

¹Simplified Practice Recommendations, R 75-29. U. S. Dept. of Com. Bureau of Standards.



THE HIGHEST, LOWEST, AND MOST CONVENIENT (MIDDLE) WRITING HEIGHT OF CHILDREN IN ONE OF THE CLASSES



CHILDREN WRITING FOR THE TEST. NOTE DIFFERENCES IN SIZE OF CHILDREN OF PRACTICALLY IDENTICAL AGES

particular data not recorded. It was held that these cases did not influence the final results as they were comparatively few in number.

The directions given the children were as simple and direct as possible, so as not to inject any element which would detract from the validity of their writing efforts. They did not know why they were writing until afterwards, when the upper grades were told of the experiment.

How the Children Wrote

The first direction was to have the children, "write a single word on the blackboard," no other direction being given. In the lower grades a short, simple word was selected, such as cat, dog, etc. In most of the upper grades the pupils were permitted to choose a word. They were then asked to write the same or some other word as high as they could, *conveniently*, without tiptoeing or exerting themselves. Finally they were directed to write another word as low as *convenient*, without stooping. The youngsters were then sent to their seats and the heights of the word were measured and recorded.

It will be apparent at once that the first word written represents the most natural reaction of the child and is likely to be the most accurate trend. Offhand it may be said that more than three fourths of this writing was approximately at eye level, some was above, but comparatively little was below. It was observed by some teachers, those in the upper grades, that the intelligent children, especially if they knew they were to write several sentences, began to write somewhat higher than customary, i.e., eye level, in order to have room for future work. But it is doubtful whether this attitude was exhibited by the child under the directions given. Further discussion will designate this first word and its height as *middle*.

High and Low Writing

The second word was written as high as the child could "conveniently." Some difficulty was experienced here as it became quite evident that in many cases, particularly in the lower grades, children entered into competition as to who could write the highest. This in spite of the warning not to write unusually high or not to stand on the toes. In a few cases the whole group result had to be discarded as showing extreme conditions. Some wrote directly under the molding, curtailing their style and writing in miniature; some "painted" their words, as they could not write freely in the position they took. This second word will be referred to as *high*.

The third word, the *low* one, suffered nearly as many vicissitudes as the high one, though

TABLE 2.
SHOWING DISTRIBUTION
OF MIDDLE WRITING OF
GRADE 4.

INCHES	
65	
4	1
3	0
2	1
1	2
60	2
9	3
8	3
7	8
6	8
5	13
4	14
3	10
2	14
1	29
50	22
9	20
8	20
7	9
6	11
5	6
4	2
3	3
2	1
1	0
40	0
9	1
8	
7	
6	
5	
4	
3	
2	
1	
30	
TOTAL	216

there was less stooping than tiptoeing in writing the second word. Some printed their words so as to be sure to write as low as possible. Here again competition had to be guarded against. It was not possible to catch all unnatural writing; but in no case were all extremes discarded, only those which were obviously so.

All the measurements were tabulated and medians as well as quartiles were worked out for each grade. Not to furnish a mass of dry tabular matter, most tabulations are omitted here, but a characteristic distribution table for "middle" writing of grade four is given in Table II.

In order to get the result in a concise form and readily appreciated, Table III was made to show the distribution of the medians for each height in each grade. No other computations were made, as a greater refinement was not warranted either on the basis of the original set-up or the use which may be made of the findings of this study later. No fractional-inch measurements were recorded, the nearest whole inch to the center of the writing being set down. For

TABLE 3.
SHOWING MEDIAN & MAXIMUM DIFFERENCES FOR EACH GRADE.

	1	2	3	4	5	6	7	8
HIGH	53.3"	57.0"	59.9"	61.3"	65.8"	68.6"	68.7"	69.1"
MIDDLE	42.8"	45.4"	47.2"	50.2"	51.3"	52.3"	56.6"	57.1"
LOW	32.1"	35.4"	35.6"	36.4"	38.1"	39.6"	43.6"	44.3"
MAX. DIFF.	21.2"	23.6"	24.9"	24.9"	27.7"	28.4"	24.8"	24.8"

TABLE 4.
COMPARATIVE DATA.

GRADES	THIS STUDY		STRAYER & ENGELHARDT		DRESSLAR	
	HT. OF CHALK RAIL	WIDTH OF BLACKBOARD	HT. OF CHALK RAIL	WIDTH OF BLACKBOARD	HT. OF CHALK RAIL	WIDTH OF BLACKBOARD
1-3	28"	36" (25)3	24" (142)330	28"	26" (142)	36"
4-5	32"	36" (26)10	26" (344)	32"	27" (344)30" (546)	36"
6-8	36"	36" (29)10	28" (5-6) (7-8)	36"	34" (7-8)	36"

(X) SEE TABLE 3

(35) THESE ARE MINIMUM HEIGHTS

"mathematic's" sake the quartiles and medians were carried out to the first significant decimal.

The Results Graphically Recorded

That the results may be made even more objective than the tabular recording, Figure A is given to show graphically the distribution of the three measures for each type of writing. The "spread" is rather narrow for most grades; taking into consideration the extremes of both high and low writing, this figure will show the extreme extent to which blackboards are used in writing by the children of each grade.

In another way the situation may be made graphic through Figure B. This shows the heights of the different writings for each grade, using medians of each of the three writing heights as they would appear on a 4-foot blackboard mounted 30 in. above the floor.

The inferences to be derived from a study of the data and the graphical representations are quite interesting. It is, however, to be remembered that we are dealing with the use children make of the boards. The use of these same boards by the teacher is another matter and was not investigated in the study.

First we are confronted with the question: How far we are to make blackboard space available for *all* of the children of each grade, using extremes as criteria? It may be argued that providing space for the median writing heights of both low and high writing is to be considered fair. As a matter of fact, most writing on the blackboard consists of rather short phrases or sentences, nor are long computations in arithmetic involved in the upper grades. Subjective judgment, due to long observation, leads the writer to the conclusion that 75 per cent of the blackboard space is that utilized from the middle writing height to 12 or 14 inches below; in other words the space between the representation of the medians of the middle and low writings in Figure B is the space most frequently used by the children. As stated, this is a subjective judgment. If we assume the more objective attitude that the medians of the three writing heights are more valid bases, then the total space between extreme lines of Figure B would represent the usable space insofar as the children are concerned.

Upper Board Not Used

For a number of years the writer's attention has been called to various features about school buildings, quite detailed matters, in connection with numerous school building surveys. One of these is the fact that the upper parts of side blackboards are so infrequently used by the pupils, and even the teacher in her written work shuns this space. In some cases a real line of wear was established at this point. This observation has found objective proof in the study—the upper parts of most blackboards are not used.

Again using the records of Table III we find that the medians of the extremes are remarkably close in extent, varying from 21.2 in. for grade I to 24.8 in. for grade VIII, with grade VI showing the greatest variation with 28.4 in. This means in effect that two feet in width virtually covers most cases of the writing done by school children, though the height of this space from the floor is, of course, different for each grade. It is probably to be granted that we would not care to make blackboards a strip two feet wide for a number of reasons, even though for children's use this would be all the space needed under ordinary circumstances. Determinism may be out of place here.

Let us see what practical use we can make of the situation which has come out of the study. In our present changing school organization and shifting viewpoint, schoolrooms are not predetermined as to use or grade, except, of course, certain special ones such as kindergarten, in-

dustrial-arts rooms, etc. What was used for a second-grade room one year may be used for a fourth grade in subsequent years, etc. We may grant that under ordinary circumstances grade room shifts are not likely to be extreme, but shifts are made from time to time. This fact possibly precludes a universally fixed blackboard as to height and width. Again, the use of side or pupil blackboards for teacher's use (assignments, drawings, etc.) will have its bearing on the matter. If the front board is to be mainly used for teacher's work, it may be said that this space, as a rule, is sufficient for this purpose and that side boards or rear ones may safely be left to the use of the pupils. Further, in some schools, many in fact, we find two or even three grades in one room; this also has a bearing on the subject, which, however, is slight except in two cases, shown in Figure B.

Recommendations for Blackboard Heights

A study of this figure and Table III will show that there are three rather distinct steps in the medians of the middle writing: grades I to III, grades IV to V and grades VI to VIII, though it seems that grade III is somewhat orphaned. For practical purposes this division seems reasonable.

On this basis and previous assumptions and statements we may conclude that for pupils' use, blackboards for grades I to III may be mounted 28 inches from the floor, may be 36 inches wide, and cover virtually a 100-per-cent demand; in fact, 30 inches would probably suffice in most cases.

The group grades IV to V would be accommodated by boards mounted 32 inches above the floor and 36 inches wide, while group grades VI to VIII would use blackboards 36 inches

FIG. B. CHILDREN OF TYPICAL HEIGHTS AND THEIR WRITING GRAPHICALLY REPRESENTED.

above the floor and 36 inches wide.

Maybe it is not feasible to use 3-foot boards for the reasons stated previously and others. Architects apparently want top molds to be of door trim height, etc. But it appears quite certain that 42-inch boards for the last two groups will provide space for teacher and pupils, and still leave much space whose use is very questionable. And as to 48-inch boards?

It is quite apparent that the adult (teacher) will write at a height very different from that of the pupil in most cases. Roughly speaking this range appears to be from about 36 inches from the floor to 84 inches. To judge from various standards a blackboard 42 inches in width, mounted 42 inches from the floor, will satisfy most cases; in some instances 38-inches floor height and a 48 inches board may be required, but not in many, to judge from experience.

The Standards Compared

Let us see how these findings are related to the customary standards. Table IV gives the results just discussed and the recommendations of Dresslar,⁴ and Strayer and Engelhardt.⁵ This study shows uniformly a greater chalk-rail height than either authority, being greater in every instance. Dresslar's other recommendations are in very close accord with the writer's findings, especially if the former's text is read and taken into account. Strayer and Engelhardt's minimum widths are quite close to the writer's, though practically there are no such odd widths of boards to be found anywhere. It may thus be taken that boards 36 inches wide may readily be accepted as practical widths as they are wide enough for pupils' use.

If this be accepted, then the Simplified Practice Committee's recommendations as to width of blackboards may have to be modified. The report makes a board 36 inches wide obsolescent, but makes a reservation by means of a note quoted herewith:

"The present volume (April 1, 1929) in the 3-foot width is sufficiently large to warrant its retention as an obsolescent item. The volume of demand, at the time of the next revision of this recommendation, will determine subsequent action."

On the score of economy, the results of Hart and Peterson's and this study might be used as a basis for future installations. Why place expensive equipment in schools when it may be shown that it may only be ornamental, and useful in part only? No doubt custom and precedent will have their bearing on the subject. It will, however, be considered of value if the conclusions drawn here are brought to the attention of school authorities even if the former are not readily accepted in practice. It will, no doubt, lead to closer observation of the blackboard use by elementary children and a corresponding change in either attitude or blackboard use and technique.

FIG. B.

SHOWING POSITION OF WRITING AT BLACKBOARDS.

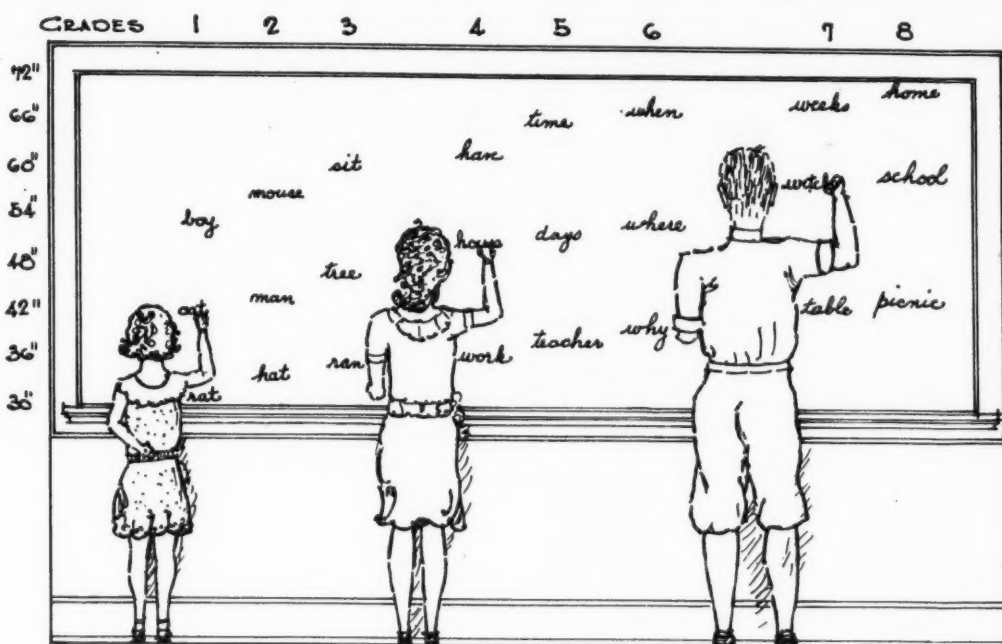
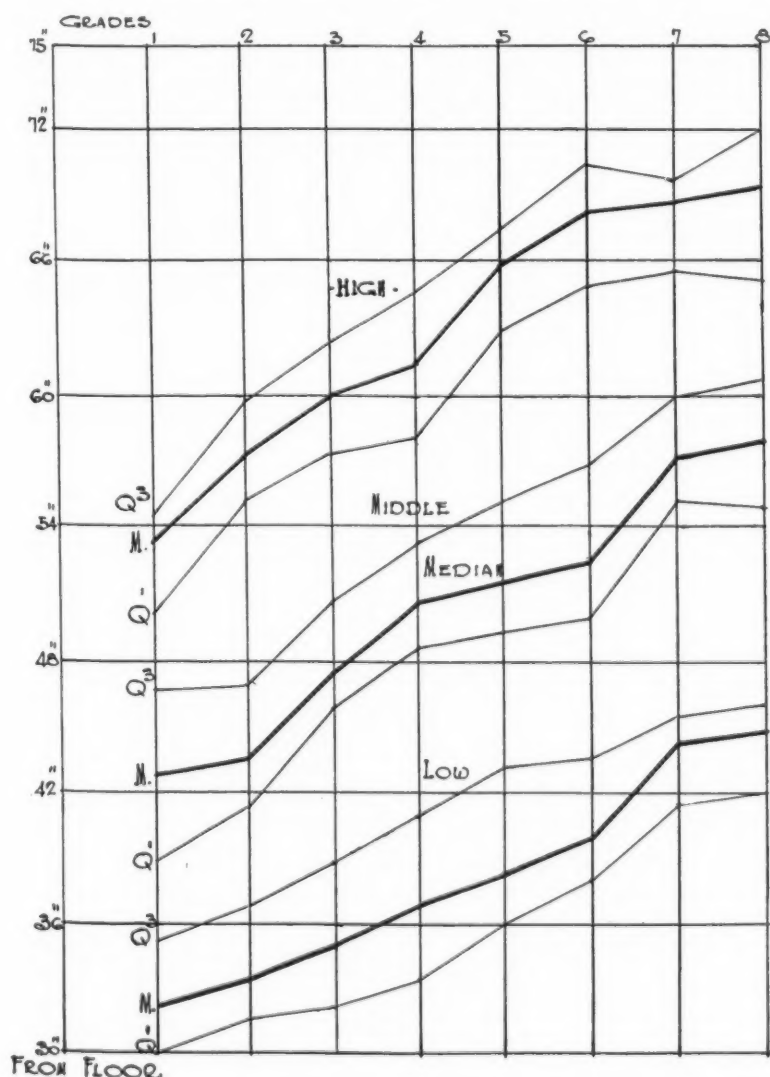


FIG. A.

GRAPHICAL DISTRIBUTION CURVES FOR LOW, MIDDLE AND HIGH WRITING.



The School Superintendent as Business Manager

Howard K. Bauernfeind, Formerly Superintendent, Monmouth, Illinois

The duties of the city superintendent of schools have become so numerous and varied that he is rapidly losing his identity as a supervisor of instruction. In the smaller cities of the United States school administration involves not only the discharge of duties which may be classified as strictly educational, but also the conduct of the business of the board of education. As a consequence, the city superintendent now holds a position which combines the supervision of instruction and the managing of the business affairs of the schools.

As a business manager the city superintendent must have a knowledge of and the ability to perform certain duties outside the field of instruction in its restricted sense. These duties may pertain to building construction, equipment and maintenance, purchases, supplies, school finance, and the strictly clerical details relating to the business of the board of education.

In 1929 the writer conducted a study to ascertain the extent to which superintendents of schools, in cities of Illinois ranging in population from 2,500 to 20,000, perform certain classes of duties which belong primarily to the field of school business management. Cities whose population is larger than 20,000 were purposely omitted from the study as it is the prevailing practice for school systems in cities of this size to employ business managers to perform the many business duties of the board of education.

By means of a series of informal conferences and correspondence with a number of city superintendents, the business duties were tentatively classified under six general heads: (1) architect; (2) clerk of the board of education; (3) commissioner of supplies; (4) purchasing agent; (5) superintendent of buildings and grounds; (6) supervisor of janitors. A check list, which included 48 items under these 6 general heads, was prepared and mailed to all superintendents in Illinois cities within the population group considered. Of the 146 cities in this group, 96 cities, or 66 per cent, returned usable data.

In making this study, the writer did not employ the rules and regulations of the board of education, since a relatively small number of such cities have this material in form for distribution. The check list was comprehensive and considered only the actual practice which prevails in the cities studied. All data were secured during the months of March to June and, since the check lists were filled out by the superintendents, the facts are apparently reliable.

The writer arbitrarily grouped the 96 cities which returned check lists into three population classes. In the first division are placed 38 cities with population of 2,500 to 5,000. This class is designed in the study as Group I. Thirty-one cities with population of 5,000 to 10,000 are placed in Group II, and the remaining 27 cities with population ranging from 10,000 to 20,000 are designated as Group III. A summary of the findings and conclusions follows.

Buildings, New and Old

1. The board of education selects the architect for new building projects on the recommendation of the city superintendent in 41.6 per cent of the 96 cities considered in this study.

2. The superintendents in the larger cities exercise more control than those in the smaller cities in specifying the general arrangement of the new buildings. The percentage who perform this duty ranges from 55.3 in the cities in Group I to 81.5 in the cities in Group III.

3. The superintendent exercises his chief con-

trol over new building projects by studying the architect's plans and specifying changes. In 79.1 per cent of the cities the superintendent performs this duty. The percentage ranges from 73.6 in the cities in Group I to 85.2 in the cities in Group III.

4. In the rehabilitation of old buildings the superintendent plans changes in rooms in 84.3 per cent of the cases.

5. In no case does the board of education take full charge of new building construction and the remodeling of old plants. The city superintendent is always consulted, but the extent of his actual control varies in the different cities.

Clerk of Board of Education

1. Ninety per cent of the city superintendents in the cities of this study perform duties which belong to the clerk of the board. Some perform only a few of the duties but others take complete charge of all clerical work relating to the business of the board. The duties most frequently performed by the city superintendent are (1) the answering of inquiries directed to the board, (2) making reports for the board, (3) making out the monthly payroll, and (4) distributing checks to teachers and other employees of the board.

2. In 40 per cent of the cases the superintendent keeps the financial records for the



PORTRAIT OF DR. DANN PRESENTED TO CITY OF ONEONTA, NEW YORK

Dr. George J. Dann, for twenty years superintendent of schools at Oneonta, New York, was honored on June 24, when friends among the educators both at home and abroad spoke at the presentation of an oil portrait of the superintendent to the city. The exercises, which were held in the high-school auditorium, were attended by the faculties of the various city schools, the members of the graduating class, and a representative gathering of friends in the city.

Dr. George M. Wiley, assistant state commissioner of secondary education, gave an address in which he paid tribute to the outstanding services of Dr. Dann to the community. Mr. Albert P. Mills, of the faculty of the Oneonta State Normal School, the second speaker on the program, spoke especially of the fine service rendered to the community and of the constant aim of the educator to appeal to the nobler and finer instincts of the boys and girls. Principal H. G. Van Deusen of the Oneonta High School read extracts from numerous congratulatory letters and telegrams from friends and educators who could not be present at the exercises. Principal Van Deusen then presented the oil portrait to the city, through the board of education. He made brief reference to some interesting facts in the life history of Dr. Dann, declaring it eminently fitting to pay tribute to his twenty years of faithful service. Attorney O. C. Becker of the board of education accepted the portrait, who, in speaking, voiced the appreciation of the loyal and efficient service rendered to the youth of the city and his efforts to develop character and the more worth-while qualities in the students.

The portrait, which is exceedingly lifelike, is the work of Mr. T. D. Tallmadge, a New York artist, and has been praised by all who have seen it.

board. In the same number of cities the superintendent keeps and tabulates the insurance policies.

3. In slightly more than one third of the cases the superintendent takes charge of the details connected with the board of education elections. The size of the cities studied influences this practice, as only 26.3 per cent of the superintendents in the cities in Group I perform this duty in comparison with 44.4 per cent in the cities in Group III.

Commissioner of Supplies

1. Ninety-two per cent of the superintendents in the cities of this study perform one or more duties of the commissioner of supplies.

2. The size of the cities is an influencing factor in determining the extent to which the superintendent serves as commissioner of supplies. The data presented reveal a positive tendency for the number of superintendents who serve as supply commissioner to decrease as the size of the cities increases.

Purchasing Agent

1. In 97 per cent of the cities of this study the superintendent serves the board of education in some degree as purchasing agent.

2. The superintendent makes all purchases for the board in 72 per cent of the cities. Size of the cities is not an influencing factor in determining the extent of this practice.

3. Before placing orders for supplies, 66 per cent of the superintendents make recommendations to the board; 48 per cent also consult with committees of the board.

Superintendent of Buildings and Grounds

1. It is the prevailing practice in Illinois cities for the superintendent of schools to perform the duties of superintendent of buildings and grounds. In only 3 per cent of the cities does the superintendent have no jurisdiction in this field.

2. The most common procedure is for the superintendent to work in coöperation with the buildings-and-grounds committee of the board.

3. In almost one third of the cities the superintendent takes charge of buildings and grounds personally.

Supervisor of Janitors

1. In 70 per cent of the cities of the study the superintendent supervises the janitors personally. This method of procedure is used more frequently in the smaller cities than in those of larger population.

2. In one fourth of the cities the superintendent employs and discharges the janitors. The extent to which this power is exercised by the superintendent increases with the size of the cities.

3. In one fifth of the cities the janitors are held directly responsible to the board of education. The size of the cities does not seem to influence the extent of this practice.

Summary and Conclusions

1. Considering the fact that originally all business duties relating to the work of the schools were discharged by the board of education, the data of this study furnish evidence that in Illinois cities, ranging in population from 2,500 to 20,000, the board has transferred the discharge of business duties to the city superintendent in a large percentage of cases.

2. The new buildings constructed in the 96 cities of this study reflect, in a large degree, the planning and vision of the city superintendents.

(Concluded on Page 130)

Arkansas Rises Educationally

Mary Elizabeth Overholt

Arkansas no longer stands forty-sixth on the national educational slate, for an educational revolution has taken place, and one of the most remarkable advances in school standards, and the most ambitious program of improvement undertaken in any state has been accomplished within the past two years. But the program is not completed and the work is still going on. Arkansas is now the leader in the South and probably in the United States in the adoption of progressive measures on behalf of the public schools," declared J. M. Foote, supervisor of rural schools in Louisiana, recently in discussing the consolidation program which is being carried on in every part of Arkansas, and which is creating a new educational history for the state.

The elimination of 500 rural schools has been accomplished during the last year, and in every case the pupils from these schools have been given schools with longer terms, better equipment, and better-prepared teachers in exchange for their one-room school with a three to six months' term taught by the lowest bidder for the job.

The surprising fact to the taxpayer is that this improvement has been brought about without extra cost. In fact, in many cases there has been a considerable saving in money because of the larger unit instead of a number of small units. This reduction in tax rate is being accomplished in spite of the fact that the state department does not have for its goal the cheapest school system, but the best that the state can afford.

Last summer Governor Harvey Parnell made the statement in an address before thousands of citizens, that Arkansas had 60,000 boys and girls entirely without high-school advantages and 20,000 school children that had the advantages of only a three, four, five, or six months' term of school. Fortunately the governor could not now make that statement unchallenged, for so rapidly have educational reforms been brought about in the state that thousands of boys and girls that had no high school in reach of them last year can this year attend standard high schools, and their younger brothers and sisters have an eight or nine months' term in



GOVERNOR HARVEY PARNELL, G. E. FLOYD OF THE STATE DEPARTMENT OF INSTRUCTION, AND REPRESENTATIVE ALFRED J. HALL, STANDING BEFORE ONE OF THE OLD SCHOOL BUILDINGS (ASHLEY COUNTY) WHICH A TYPICAL CONSOLIDATION PROGRAM HAS MADE OBSOLETE

place of the three or four months' term of last year.

An Era of Consolidations

The largest school consolidation in Arkansas and one of the largest in the South is found at Hamburg, where 14 districts and 19 buildings were consolidated, bringing into the consolidated district a territory of 308 square miles or a third of Ashley county. Transportation is reported as satisfactory and so smoothly running has this system proved that the rest of the county is becoming almost as well consolidated as the Hamburg area. This gives interest to the recent survey in the county which shows that 90

per cent of the children of the county now have the advantages of a standard elementary school, and 77 per cent of a standard high school. Standards for teachers have been raised, and the term of school has been lengthened until no white school in the county has a term of less than seven months.

Yet the significant fact remains that only half of the property in the county carries the 18-mill levy, and much of it only a 12-mill levy. In Lafayette county where the consolidation program has been thoroughgoing, the school at Lewisville reports that with the same tax levy as previous to consolidation 150 instead of 95 pupils are kept in school. Terms of school for most of the pupils have been lengthened, the standards of the teaching force and teaching salaries have been raised. Other school centers in the county tell the same story.

Consolidation is no longer in the experimental stages in Arkansas; its success is proved. Opposition to the program is found in the state where it has not yet been tried — not where it exists. Pulaski's oldest consolidated district, formed in 1923, voiced at the polls its sentiment regarding consolidation when it voted 100 per cent for the county unit system. Incidentally, this school plant has become one of the best equipped in the state, having added recently a gymnasium and vocational-agriculture building, and this year a new senior-high-school building.

Making History Every Day

Scarcely a day passes but the daily press records another chapter in this educational campaign which is making history so fast for Arkansas and the South. The little town of Cove has recently added a beautiful modern school plant to its public improvements. The cost was \$14,000, and was made possible by the consolidation of five districts with Cove as a school center. In 1921 Ouachita county had 65 school districts, but it now has only 31 and a petition for five more consolidations have been presented to the county board.



CLASS IN A TYPICAL CONSOLIDATED SCHOOL OF ARKANSAS

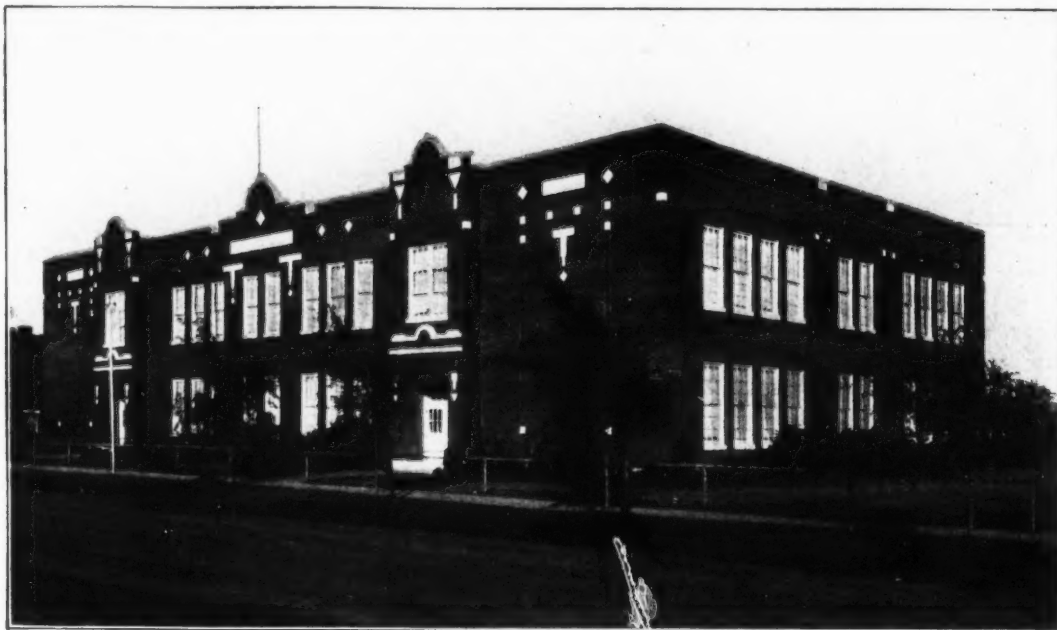
Children in an intermediate grade of the Okay School in Howard County. Several of the rooms in this school are equipped with tables and chairs for socialized recitations.

The little town of Sparkman with a population of 500 people has produced a national championship basketball team, but it is because it is a consolidated school center that it has at its command the material and the coaching ability that it takes to win athletic laurels. Ashley county, which has reduced the number of districts from 45 to 24 in the past two years is making a series of further consolidations. During the three years that W. H. Houser has been county superintendent of schools in Logan county the number of schools has been reduced from 98 to 34, and a consolidation system that would make seven school centers in the county is now being considered.

A report made by J. W. Teeter, county superintendent in Nevada county shows that during the year, high-school advantages have been brought to 500 rural boys and girls this year, length of terms has been extended to at least eight months, grade schools have been im-



A NEW HIGH-SCHOOL BUILDING AT RATCLIFF, ARKANSAS, A CONSOLIDATED SCHOOL CENTER
This building meets the requirements of the State Department for a standard high-school building.



THIS BUILDING IN A TOWN OF 2,000 POPULATION HOUSES THE JUNIOR AND SENIOR HIGH SCHOOLS
Ten districts affiliated to make possible this modern plant.

proved by reducing the number of grades taught by a teacher, type of instruction has been improved because better-equipped teachers were made available by this program, library and other equipment has been greatly improved, and standardization of schools has been made possible. A giant consolidation project is under way in both Union county and Franklin county, with both determinedly demanding improvement of school facilities for rural boys and girls.

State Department Active

The assistance which the state department renders is an important factor in the rural-school program. While the county consolidation is left entirely to the school districts within that county, the advice of the state inspector is always available. State aid comes first to consolidated centers, and a generous allowance is made where conditions warrant it. Again funds from the state equalizing fund are an important factor in construction of new buildings.

Supervision of buildings by the state department has resulted in the construction of many standard buildings throughout the state. Plans for standard school plants are furnished by the state department and an effort is made to persuade districts to erect plants that meet approved standards. During the past year 94 per cent of the new buildings were constructed according to these standard plans. This building service is of inestimable value in rural communities where the building committee is composed of men who have no knowledge of what is necessary in a modern school plant.

The new building required by consolidation can be built according to the standard plans furnished by the state and the committee can rest assured that they are giving the community the right type of school plant. In 1924 only 8

per cent of the school buildings in the state met the most elementary standards generally accepted for school buildings. Today most of the new buildings meet these standards. It is noteworthy that only 24 one- and two-room school-houses have been built in the state during the past year.

Problem of Raising Standards

The state standard plans include elementary schools and high schools, and these are varied in size and type to meet the needs of the city or the rural-school center. Needs of each particular plant are given careful consideration and the type best suited to the individual conditions is recommended. This is resulting in many neat, convenient, and beautiful school plants throughout the state.

Raising standards of teachers was one of the first problems to be met in raising the educational standards of the state. With the consolidation program and the resulting longer terms of school, it has been possible for the state to require teachers to meet standards that were impractical so long as the meager salary of the three- or four-month rural school made teaching only a part-time job, and did not attract teachers with college training.

The result was that Arkansas lost all of her best-equipped teachers to neighboring states where salaries, teaching conditions, equipment, and length of term were more satisfactory.

(Concluded on Page 130)



A TYPICAL CLASSROOM IN A CONSOLIDATED SCHOOL
An upper grade in the Okay School, Howard County, Arkansas. The children are doubling in the seats for photographic purposes only.

Eliminating the Deathbed Gamble

Ida E. Housman, M.A., Demarest High School, Hoboken, N. J.

More than sixty years ago, it was the custom in a certain large school in New York City to take a collection to defray the funeral expenses of a fellow teacher who left no funds. The idea occurred to a young teacher, named Vanderbilt, that it would be better to organize an association in which each member was pledged to contribute a dollar whenever requested, with the assurance that the same assessment be made upon his death to provide a similar death benefit. This was the forerunner of the teachers' mutual-aid movement; later on, it led to annuities for disabled teachers. These annuities were paid for usually by the teachers' contributions, supplemented by contributions from the public and the proceeds from bazaars.

The next step was to secure appropriations from the city or from the state. No attempt was made in those early days of pension legislation to determine the costs of the benefits promised under a life-insurance, sick-benefit, or annuity plan. The teachers' rates were so insufficient and the appropriations from the city or the state were so inadequate, that those who joined these organizations in youth frequently faced old age with a prorated pension or none at all. The bankruptcy of several teachers' aid organizations led to a complete reorganization of pension systems on an actuarial basis.

The actuarial pension systems, too, have not been operated without difficulties due to inconsistencies and errors in the laws. The present paper will discuss an abuse of teachers' annuities arising from a gap in the New York laws.

Nearly all retirement laws as applied to teachers contain optional clauses. At retirement, a teacher may choose to take the largest retirement allowance which can be provided by the reserve built up by her contributions and the reserve accumulated by the state or city's contributions. Should she die immediately after retirement no return is made to her estate. Or, she may use the optional clauses which provide a lesser retirement allowance during life, plus an additional benefit. In New York City, the laws contain three optional clauses. Option 1 means that the balance of all monies to her credit in the reserve funds shall be paid to a teacher's estate, when she dies after retirement. If, however, she should live so long that all her reserves are exhausted, then, her allowance continues until her death, but her estate receives nothing. Option 2 provides that the same allowance shall be paid to the person named *at the time of retirement*. Option 3 provides that one half of the allowance shall be paid to the person named *at the time of retirement*.

The histories of the various pension systems show how errors and inconsistencies creep into the laws. When the New York City Teachers' Retirement Law was enacted in 1917, it was not anticipated that the inclusion of Option 1 would lead to abuses and to the so-called "deathbed gamble." The omission of a clause specifying the length of time before this option became effective created a serious financial situation.

The Deathbed Gamble

Here is a case: The question involved is whether the estate of a teacher shall receive \$1,500 or \$22,859. Miss G— was a teacher in New York and selected Option 1. Her application for retirement required signature only, as New York City teachers were urged to have their papers ready for use in emergency, such as accident or sudden illness. She became seriously ill; her application was filed with a member of the Retirement Board at 1:30 a.m. She passed away at 10:30 a.m. and her papers were

Effective legislation for teachers' annuities is a problem in every state and every community. As the present article indicates there is blundering in much of the existing legislation. The entire cause has been harmed by errors in the laws which permit grasping teachers to benefit unfairly at the expense of the state. The present paper is written by an authority on teachers' pensions who has done much to secure a square deal for teachers and who is equally insistent that the state and the community shall be given a square deal by the teachers.

received at the office of the board shortly afterwards. The Supreme Court (district) ruled that the delivery of the papers at 1:30 a.m. did not constitute filing in the legal sense; the Appellate Division reversed the decision. The case will be taken to the State Court of Appeals by the corporation counsel. Should the estate lose, the total award will be only about \$1,500; should it win, \$22,859. Which should it be?

A case now pending hinges on the question: Did the teacher sign her application for Option 1? Nearly four years after the death of her sister, a Brooklyn teacher applied to a Supreme Court justice for a mandamus directing the Teachers' Retirement Board to *retire her dead sister*, and to pay her all money due from the retirement fund. The assistant corporation counsel acting for the retirement board claims that the teacher was so irritable on her deathbed that she refused to sign, insisting that she had previously signed an application for Option 1. The board submitted copies of the blank showing it to be filled in except for the dead woman's signature; therefore, the board claims the application void.

Numerous cases show that before the amendment of the New York City Teachers' Retirement Law in 1929, teachers literally were gambling with death. To win, certain formalities of retirement had to be met, otherwise, the estate received only the return of the member's contributions with interest thereon.

George B. Buck, consulting actuary of the New York City Teachers' Retirement System, explained the situation in an address given in 1930 before The National Council of Teachers' Retirement Systems. The following abstracts from his address are quoted from the proceedings of the 7th annual meeting.

"The practice developed to such a point that the board was required to receive applications for disability retirement day or night and an application could be entered to any of the teacher members of the board at any time to be effective immediately upon its delivery to the teacher member. The medical board was examining teachers for disability retirement at 2 and 3 o'clock in the morning on applications filed at 1 o'clock the same morning. Of course, no one could have expected that such a condition could come to pass because the optional benefits had been used in other countries successfully for years before the teachers' retirement system adopted them, but with this development it became possible for a teacher to file an application for retirement, to effect retirement, to have a choice of option become operative and to die within a period of less than an hour with the retirement system paying a claim of possibly \$10,000 to \$20,000 on the ground that the teacher had effected insurance on her life.

"While this condition was developing in the teachers' retirement system in the City of New York, other retirement systems were established and in their laws provision was made that an option could not be effective unless the application was filed 30 days in advance, so that the options were fairly well restricted to teachers

who would have retired with the optional provision regardless of their state of health. New York City, however, continued to operate without a 30 day provision.

"But even so, teachers on whose account this system of death benefits had been built up were not satisfied because, while the insurance was costing the city very heavily, the teachers as a whole did not benefit from this increase in cost because, if a teacher failed to go through the formality of making an application for retirement the family was not entitled to a benefit, so that no teacher knew whether on her death she would be among the 48 per cent that did not succeed in effecting an option, or would be among the 52 per cent that did effect an option.

"The result was that whereas in 1920 only \$51,000 was disbursed for optional payments, in 1922 the payments increased to \$284,000, to \$500,000 in 1924, to \$687,000 in 1926, and to \$719,000 in 1928. . . ."

Option I as Life Insurance

The purpose of the New York City teachers' retirement law was to provide retirement allowances for aged and disabled teachers. The misuse of Option 1, as an insurance benefit for teachers in active service, was not anticipated when the law was enacted. Consequently, New York City teachers until recently have been obtaining free life insurance. This was shown by Mr. Buck in a report made in 1928 to the retirement board. Such insurance would cost from \$30 to \$75 per month, if purchased from a commercial insurance company.

The free insurance was obtained in this way: Miss Smith filed a notice with the retirement board that in the event of retirement, she chose Option 1. Since Miss Smith was about to undergo a serious operation, she applied for disability retirement. Her retirement became effective, and Option 1 covered her with insurance of \$12,529. But, she recovered, and requested the cancellation of her disability retirement and her reinstatement as a teacher. She was reinstated. What did the insurance protection of \$12,529 cost her? Nothing. If she had actually retired, she would have paid a premium of \$169 annually, as this sum represents the difference between the normal retirement allowance and the allowance payable under Option 1.

Upon the basis of numerous experiences Mr. Buck suggested that, when a disability pensioner cancels her Option 1 retirement, the teacher should be restored to active duty only after a readjustment in her rates, to compensate the retirement system for the insurance protection it extended. No action has been taken on this suggestion by the retirement board.

Attempts to Remedy by Legislation

Much dissatisfaction was expressed concerning the situation just described, as teachers desired an assured death benefit. The city was concerned with the increased cost of the retirement system caused by the use of Option 1 as a deathbed benefit and health insurance. As a consequence various legislative bills were introduced at Albany, and intense controversies arose among the teachers who championed rival bills. Dr. W. J. O'Shea, superintendent of schools, appointed a committee which prepared a bill introduced by Senator Downing. On the same date, the Moffat Bill was introduced by another delegation of New York teachers. Subsequently representatives from the various factions met and agreed on a compromise bill, which was enacted as the Downing-Moffat Act. This act, which became effective on April 10, 1929,

amended Section 1092 of the Teachers' Retirement Law by adding a new subdivision after subdivision N.

Providing an Assured Death Benefit

What are the main provisions of the Downing-Moffat Act?

First, the Downing-Moffat Act ended the death gamble, as no optional benefit can become effective until 30 days after an application for retirement has been filed. There is no need for rushing an application for retirement to the Retirement Board.

Second, the total death benefit consists of two parts: (a) The accumulated deductions or contributions of the member with interest at 4 per cent, compounded annually; (b) an additional death benefit based on the contributor's years of service.

The additional death benefit is paid for teachers who die in service, provided they have taught at least 6 months; or, for those who die during the 30-day period when options are not operative. If a teacher retires without selecting an option, and dies 30 days after retirement, his estate or beneficiary receives nothing. Consequently, New York City teachers' associations warn teachers not to retire until they have filed optional applications. A previous amendment permits an application for an option to be filed at any time. As members may become mentally disabled, they are advised to act immediately.

Figuring the Death Benefit

Several technical requirements of the law require an explanation. The minimum death benefit equals one-half years' salary after 6 months of service. The maximum death benefit is not to be greater than two and three-fourths times the average salary.

In the administration of the law three types of members are considered: (a) present teachers or those in service prior to September, 1917; (b) new entrants or those who entered since September, 1917; and (c) future entrants, or those who entered since April, 1929. Prior service for a present entrant means all credited city and outside service prior to September, 1917. Prior service for new entrants means credited service up to the date of appointment. Average salary means usually the average annual salary earned during 5 years immediately preceding the date of retirement or the date of death.

Death Benefit for a Present Teacher

To find this benefit the New York law requires: (A) Multiply 6 per cent of the average salary by the years of city service up to April 10, 1929. (B) Multiply 5 per cent of the average salary by the years of city service since April 10, 1929. The total number of years credited under A and B may not exceed 35 years. (C) Multiply 5 per cent of the average salary by 5/7 of the years of prior service. The total number of years credited may not exceed 25 years.

An illustration: Miss Present Teacher was appointed in 1896. Suppose she dies in 1931. She will have 21 years of prior service and a total city service of 35 years. Her average salary is assumed as \$3,600.

For 33 years service before 1929 her estate will receive 33 times 6 per cent or 198 per cent; for 2 years service since 1929, 2 times 5 per cent or 10 per cent; for 21 years service prior to 1917, a credit of 15 years, 15 times 5 per cent or 75 per cent; thus making a total of 283 per cent of her average salary. Her additional death benefit equals 283 per cent of \$3,600 or \$10,188. Her total death benefit equals \$10,188 plus her contributions to the retirement fund for 14 years with compound interest at 4 per cent thereon.

Death Benefit for a New Entrant

To find this benefit: (A) Multiply 6 per cent of the average salary by the number of years of

city service rendered between September 17, 1917 and April 10, 1929. (B) Multiply 5 per cent of the average salary by the years of city service since April 10, 1929. The total number of years credited under A and B may not exceed 35 years.

Illustration: Miss New Entrant was appointed in 1919. Suppose she dies in 1954. Her average salary is assumed as \$3,600. What will her estate receive?

For 10 years service before 1929, 10 times 6 per cent or 60 per cent; for 25 years since 1929, 25 times 5 per cent or 125 per cent; thus making a total of 185 per cent of her average salary. Her additional death benefit equals 185 per cent of \$3,600 or \$6,660. Her total death benefit equals \$6,660 plus her contributions for 35 years with compound interest at 4 per cent.

Death Benefit for a Future Entrant

To find this benefit, multiply 5 per cent of the average salary by the number of years of city service since April 10, 1929. The maximum allowance is 20 years' credit or the equivalent of one year's pay. If a teacher has a total service of 6 months or more and less than 5 years, she receives six times the average monthly salary earnable immediately preceding her death. If she has taught less than 6 months, then the estate receives only her contributions with interest thereon.

Illustration: Miss Future Entrant was appointed in 1930. Suppose she dies in 1965. Her average salary is assumed as \$3,600. What will her estate receive?

For 35 years' service the maximum allowance is 20 years; therefore 20 times 5 per cent or 100 per cent of the average salary. Her additional death benefit equals 100 per cent of \$3,600, or \$3,600. Her total death benefit equals \$3,600 plus her contributions for 35 years, with compound interest at 4 per cent.

Elimination of "Insurable Interest"

Two important changes have been made in the New York pension law in regard to the options by the Downing-Grenthal Act, enacted at the same time as the Downing-Moffat Act. First, the words "insurable interest" have been eliminated from the teachers' retirement law, so that it is possible for a teacher to designate

any person as beneficiary. These words safeguarded the member, as the beneficiary was restricted in designating her beneficiary to either a blood or a marriage relationship, or a financial defendant. They prevented any unscrupulous organization or individual from obtaining the benefit. Second, the member may change his beneficiary under Option 1 at any time, either before or after retirement by a new designation filed prior to death.

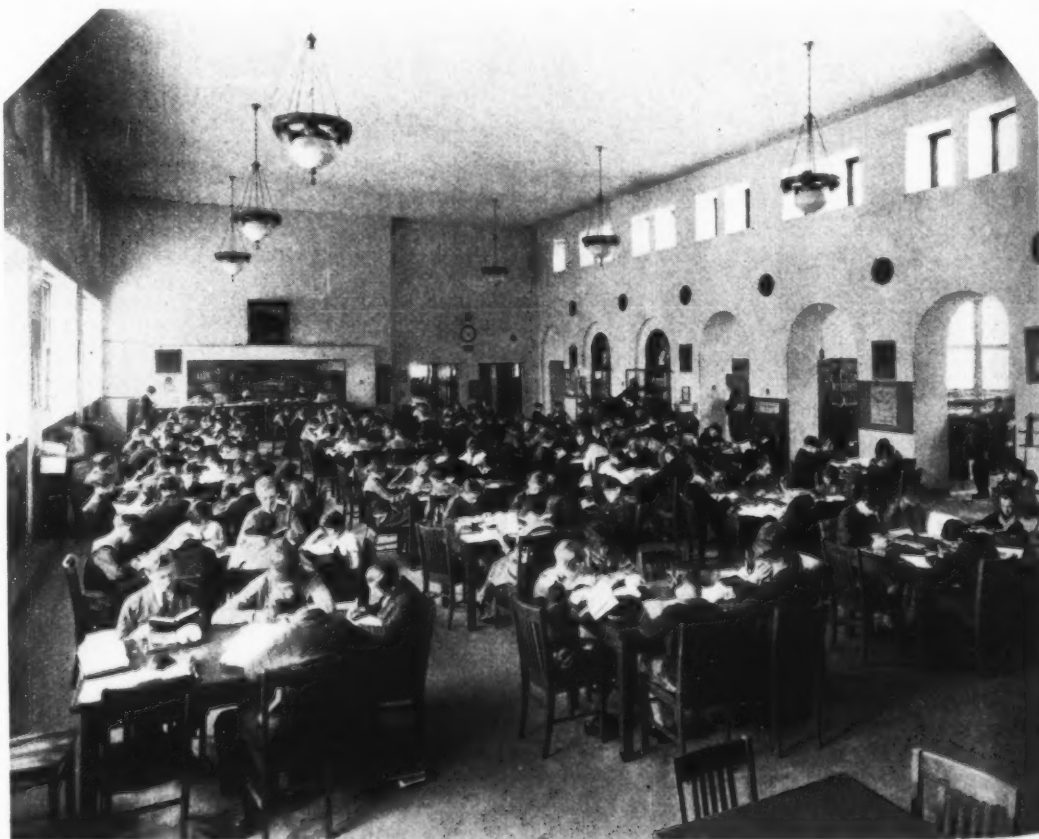
The Remedy for the Deathbed Benefit

The remedy for the misuse of Option 1 as a deathbed benefit is to state a definite period before an option becomes operative after retirement. Recognizing this danger, actuarial retirement laws contain frequently a 30-day clause. It has been suggested that this period be lengthened to avoid "selection" against a retirement fund.

Before explaining "selection," it is necessary to discuss the financial difficulties which must be solved in establishing and maintaining a sound retirement system. These are problems for an actuary who is experienced in pension finance. The actuary must calculate the rates of contribution which the employer and the employee must pay so as to build up reserves adequate to meet future retirement or other benefits. As neither the teacher nor the employers (the school board) made payments for service prior to the enactment of the law, the liabilities created by previous teaching service are known as the accrued liabilities. The employer must pay two rates; a rate to cover the accrued liabilities, and a rate for service since the enactment of the law. For new entrants, the employer pays only the normal rate of contribution for service rendered since the law was enacted.

Closely connected with the financial stability of a retirement fund is this question of "selection." Suppose an Option No. 1 benefit is paid, then the liability of the retirement system is cancelled for this member. Theoretically, every member should receive, either as a retirement allowance or an optional benefit or a death benefit, the value of the total reserve to his credit. But, here is the danger: In reserve systems prior service credits are guaranteed, which take years

(Continued on Page 130)



A BUSY AND EFFECTIVE SCHOOL LIBRARY

The library in the Technical High School at Omaha, Nebraska, serves quite as much for study purposes as it does for general library and reading purposes. The room is as busy as shown in the illustration during practically every period of the school day, a situation which should obtain in every school library.

Published Opinion on Schoolroom Ventilation¹

Part II. Window Ventilation vs. Mechanical Ventilation

V. T. Smith, Bureau of Educational Research, University of Illinois

The present ventilation controversy. The present controversy concerning the best methods of ventilation centers chiefly around the pros and cons of mechanical or fan ventilation as compared with "natural" or window ventilation. The discussion has been caused by the reports of the New York State Ventilation Commission. A good brief account of the early studies of this commission is given by Kimball.² In an article in 1923, he described some of those studies, and gave some of the conclusions at which they had arrived. Another excellent account was given by Hallet,³ a member of the commission who said: "Window ventilation frequently means no ventilation." The 1926-27 studies which the commission carried on in Syracuse are reported by Duffield,⁴ the secretary and director of field studies of the Commission. The latest report from the New York Ventilation Commission⁵ is given by Butsch⁶ in the *Elementary School Journal*. The principal point of dispute aroused by the earlier reports was whether or not window ventilation is more conducive to the health of the pupils. The first studies and those in Syracuse in 1926-27 have been interpreted by some authorities as furnishing complete and final proof of this contention while even the members of the commission were certainly not convinced. The latest report by Butsch,⁷ referred above, doubtless will precipitate another series of discussions because of its revolutionary finding that there is no significant relation between the temperature, humidity, rate of air flow, total air flow or rapidity of cooling effect of schoolroom air and the health of the pupils. If it is true, as they now firmly claim, that there is less sickness in window-ventilated rooms than in mechanically ventilated rooms and yet there is no relation between these physical conditions and health, then there must be some as yet undiscovered mysterious quality about window air which will account for the difference.

As evidence that the New York State Ventilation Commission were not so firmly convinced of the final nature of their findings, the statements of some of the members may be quoted. Thomas J. Duffield, the executive secretary and director of field studies for the commission, made a report of the Syracuse studies⁸ in which he gave a list of factors which might cause error and said: "The conclusion that natural ventilation . . . is more healthful is hardly warranted from this study." In another article Duffield⁹ discussed the necessity of a positive control of pupils "air column," B.T.U. output of heat per pupil, and air currents that quite evidently are a far step from the hit-or-miss type of ventilation to be found usually in the window-ventilated rooms.

Another public statement showing lack of conviction concerning the superiority of the window system is found in the recent article by Ingels,¹⁰ research engineer of the New York commission, in which he states that the mechanical systems used in the Syracuse study were not typical of the best mechanical ventilation. He said that all of the systems were "split." Thermostats failed to work because of clogged needle valves or leaky diaphragms. The implication is clear in his article that he believes the ineffectiveness in some mechanically ventilated systems is due to failure to instruct and follow up the engineer. In 1923 D. D. Kimball, another member of the commission stated¹¹ that artificial ventilation had been found to be quite as satisfactory as window ventilation. Again, in 1924, Kimball¹² stated his opinion that there should be 30 cubic feet per minute and that there is nothing more essential than air motion, both of which ideas are contrary to what the commission is generally supposed to have decided. He also said "The operation of the window ventilation system . . . requires constant attention and imposes on the busy teacher duties which are the first to be neglected. Only when the interest, enthusiasm, and attention of the teachers are obtained . . . and other conditions are favorable, will the use of the window-ventilation system be found practical." Even Professor Winslow,¹³ chairman of the commission, who appears to be the leading exponent of the window system, says: "In some schools where dirt, smells, or noise from without make the opening of the windows impossible, fan ventilation may still have its uses even in the classroom." Again he says:¹⁴ "For the ordinary schoolroom, for the use of normal children, with ordinary indoor clothing, window ventilation alone will rarely prove adequate."

In view of these quotations from the members of the commission itself, it is surprising to read extreme statements like the one by Keene.¹⁵ In his new book *The Physical Welfare of the Child*, he repeatedly states that the window gravity system is superior to the mechanical system. He even predicts that "the forced fan system . . . will be abandoned." Another writer who frankly and whole-heartedly espouses the cause of the "natural" system is Dr. T. D. Wood. His article¹⁶ in the *N. E. A. Journal* contains unproved generalizations and unsubstituted statements. Some of them are:

Ventilation cannot be automatic.

We no longer believe in "air-borne disease."

Mechanical systems (of ventilation) fail.

The entire article is characterized by similarly biased and inadequate treatment of the subject. His article a year later in the *SCHOOL BOARD JOURNAL*,¹⁷ is also a frank attack on engineers who support mechanical ventilation systems. It argues in favor of the window gravity system and lists the requirements for effective window

ventilation, apparently unaware of the fact that these very requirements are rarely present in a normal school-building situation and that they prohibit window ventilation as the general solution to the problem. Another example of such overdrawn conclusions is found in an article by Dr. Buice¹⁸ in the *Texas Outlook*, in which he says, "As a result of the work of the New York Commission, the fan system of ventilation for schoolrooms seating fewer than 100 pupils will be junked. The window-supply gravity exhaust system will be substituted." It is such statements as this that show the harm which may result from inadequately considered reading of the reports of the commission. An otherwise excellent paper is thus made unscientific and unreliable. Unfortunately, the unsuspecting reader may be taken off his guard because of the high position of the writer and considerable injury may be done to the schools as a result.

It may be objected that the studies of the New York Ventilation Commission have seemed to prove that there is more respiratory illness in mechanically ventilated schools than in so-called "naturally" ventilated schools and that this proves that there is something besides comfort, namely health, to be considered. But according to their own finding, the physical conditions have no significant relation to health and it has long been held that the chemical elements of the air are of little consequence in this regard. Peter H. Bryce,¹⁹ in writing on the validity of school records of respiratory illness as a criterion for the efficacy of any ventilation system, says that such findings should be carefully checked. He shows that in three Canadian schools the absence caused by illness varied from less than 3 to 10.4 per cent in schools where there was only window ventilation. It has also been repeatedly pointed out by others that it must be extremely difficult, in view of other factors involved, to measure the effect on health of from 4 to 6 of the 24 hours, unless the rest of the day is accounted for.

It is doubtless in view of such considerations as these that the most of the writers on the subject of ventilation are frankly skeptical concerning the as yet tentative conclusions of the New York Ventilation Commission and that the general school public refuse to be stampeded into their acceptance. It is true that there does seem to be some wavering on the part of certain writers who formerly were firmly convinced of the superiority of mechanical ventilation. In 1923 Lewis²⁰ wrote an article in which he saw only the disadvantages of the window ventilation. He told of visiting a large school in Michigan where window ventilation was found to be very unsatisfactory and mentioned some generally impossible conditions which are necessary in order to produce desirable results with that system. In January of that year²¹ he set up a similarly difficult set of conditions for the effective operation of unit systems. But in 1928²² he seems to have gone over to the camp of window ventilation supporters. He says that "there seems to be some as yet unproved health quality in the environment of the pupils in the naturally

¹The first installment of this paper appeared in the July, 1930, issue of the *SCHOOL BOARD JOURNAL*, p. 53.

²Kimball, D. D., "What the New York State Commission on Ventilation Did, and Why," *SCHOOL BOARD JOURNAL*, 67: 47-48, 109, 110, 113-14, August, 1923.

³Hallet, E. S., "Mechanical vs. Window Ventilation," *SCHOOL BOARD JOURNAL*, 67: 46-47, 99-100, 103-104, August, 1923.

⁴Duffield, T. J., "The School Ventilation Studies of the New York Commission on Ventilation," *SCHOOL BOARD JOURNAL*, 76: 57-59, 160, January, 1928.

⁵"School Ventilation Study in Syracuse," *American Journal of Public Health*, 18: 326-30, March, 1928.

⁶Reorganized under this name in 1926 and dissolved in 1929.

⁷Butsch, R. L. C., "A Comparative Study of the Effects of Different Types of School Ventilation on the Health of Pupils," *The Elementary School Journal*, 30: 16-27, 123-32, 208-17, September, October, November, 1929.

⁸Butsch, R. L. C., *ibid.*

⁹Duffield, Thos. J., "School Ventilation Study in Syracuse," *American Journal of Public Health*, 18: 326-30, March, 1928.

¹⁰Duffield, Thos. J., "A Preliminary Note on Radiant Body Heat and the School Ventilation Problems," *SCHOOL BOARD JOURNAL*, 75: 65, July, 1927.

¹¹Ingels, M., "Why Mechanical Ventilation in Schools is Under Fire," *Heating and Ventilating*, 26: 62-4, March, 1929.

¹²Kimball, D. D., "What the New York State Commission on Ventilation Did and Why," *SCHOOL BOARD JOURNAL*, 67: 47-8; 109-10; 113-14; August, 1923.

¹³Kimball, D. D., "Twelve Years of School-Building Ventilation," *SCHOOL BOARD JOURNAL*, 68: 54-6, 51-2, January, February, 1924.

¹⁴Winslow, C. E. C., *op. cit.* p. 46.

¹⁵Cottell, J. McKun, (editorial) "School Ventilation," *School and Society*, 12: 154, August 2, 1924.

¹⁶Keene, C. H., *The Physical Welfare of the Child*, Boston; Houghton, Mifflin Co. 1929. pp. 57-64, 247, 358, 457-8.

¹⁷Wood, T. D., and Hendrickson, E. M., "Fresh Air and Ventilation in Schools," *The Journal of the N. E. A.*, 15: 81 March, 1926.

¹⁸Wood, T. D., "How to Judge Good Ventilation," *SCHOOL BOARD JOURNAL*, 74: 44, 154; March, 1927.

¹⁹Buice, W. A., "Revolutionary Changes in Scientific Ventilation of School Buildings," *The Texas Outlook*, 10: 48, October, 1926.

²⁰Bryce, Peter H., "The Impasse in the School Ventilation Situation," *Heating and Ventilating*, 25: 91-2, January, 1928.

²¹Lewis, S. R., "Ventilating With Window Inlets," *SCHOOL BOARD JOURNAL*, 66: 51, 52, 133, June, 1923.

²²Lewis, S. R., "Some Phases of the Planning and Installation of School Heating and Ventilating Equipment," *SCHOOL BOARD JOURNAL*, 66: 38-40, 145, January, 1923.

²³Lewis, S. R., "Practical Ventilation for Schoolrooms," *SCHOOL BOARD JOURNAL*, 77: 53-4, 158, 161, July, 1928.

ventilated classrooms, particularly where the air supply has not all been heated by passing over heated surfaces." He then suggests several "reasonably possible agencies" for this admitted superiority of "naturally" ventilated rooms. These are lower temperature, invisible rays, reduced air motion, unheated air supply containing some "vital property," and stimulation due to sudden temperature variations. Following this discussion he proposes several plans for installing window ventilation. It should be admitted, however, that he suggests a mechanical means of delivering unheated air into the room in such a way that it will be evenly diffused with heated air in much the same manner as window ventilation does (when it works as it should). And in October, 1929, he is quoted²³ as saying that: "Ignorance is the cause of the criticism of mechanical ventilation. . . . Ignorance in the design and in the operation of these plants," and "There is less criticism than is claimed."

This suggestion by Lewis concerning the exaggerated notion of the amount of criticism is probably warranted by the facts. Furthermore, the tendency to shift from belief in positive mechanical ventilation to ventilation which depends on the whims of the wind and the memory of the teacher does not appear to be characteristic of most of the authorities on the subject. Rather the tendency is to advocate improvement of the mechanical systems in such a way as to eliminate drafts and utilize any qualities that unheated outdoor air may eventually be found to possess by admitting it cold and mixing it with conditioned air in such proportions as are found to be advantageous. Willard²⁴ says ". . . a mechanical system designed on the basis of our present knowledge is in most cases the best solution of this problem if complete and positive automatic control of the proper air conditions in a schoolroom is to be accomplished." Bryce²⁵ reports that investigations of the carbon-monoxide gas in the streets of Chicago showed as high as 1/10,000 in the Loop, which revealed the necessity of purifying city air. He says, "The poisonous effects of 1/10,000 on children continuously exposed would be very serious." Dr. Rush, in discussing the New York Commission Report, says²⁶ that the arguments against controlled ventilation on the basis that it needs better supervision is poor, and urges us to make better provisions for its effective supervision.

Recent installations. Another evidence that the school public is not taking the window ventilation agitation very seriously is to be found in the systems that are being installed in the most recently constructed buildings. Howett²⁷ describes the system that is being used in a new \$2,300,000 junior-high-school building in Chicago as being automatic, with automatic damper controls, exhaust ducts, recirculation, etc. Room temperature is kept at 68 to 70 deg. F. summer and winter; humidity is kept at 40 per cent. Foster²⁸ describes the system used in the new Denfeld senior high school in Duluth, Minnesota, as having washed, mechanically conditioned air. It is difficult to see how such great plants as these could depend on the uncertain window type of ventilation.

As to the latest findings of the commission, that the physical conditions of air are not significantly related to health, a much greater quantity of proof will be required before the public will be convinced. The findings of the



MR. E. D. CLINE

Mr. E. D. Cline, formerly assistant superintendent of schools at South Bend, Indiana, has been elected to head the school system at Dubuque, Iowa.

Mr. Cline is a graduate of Drake University at Des Moines. He holds a master's degree from Iowa State University, and is completing graduate work leading to the Ph.D. degree in school administration. Following his graduation, he filled various positions as superintendent in Iowa schools, assistant in research service, and secretary to a committee on school-building surveys. In 1925 he was appointed director of schoolhouse planning at South Bend, Indiana, and in 1928 was made assistant superintendent of schools, which position he continued to hold up to the time of his present appointment.

earlier studies made by the commission have been interpreted by many students of the problem as indicating that schoolroom sickness bore a significant relation to room temperature. Dr. C. E.-A. Winslow²⁹ held the opinion that the two or three degrees higher temperature demanded for comfort in the mechanically ventilated rooms accounted for the greater amount of respiratory sickness. This idea has been repeated by other students of the subject, and the writer is still of the opinion that, if the findings of the Syracuse study proved anything, it was that lower temperatures are more conducive to health. Duffield's report³⁰ of that study shows that in the only case listed where the average temperature of a mechanically ventilated room was lower than that of the window-ventilated rooms the percentage of sickness was also lower. McClure³¹ in his thesis on ventilation, stated as one of his conclusions: "Temperature is the most important factor in ventilation." Even as late as September, 1929, Willard³² stated that "It is more likely that this altered quality (of mechanically conditioned air) is merely a manifestation of the result of our heating in those schoolrooms. . . ."

Conclusion. In the opinion of the writer the present situation in regard to school ventilation may be summed up much as was done by Walker³³ in a recent article. He says that the present controversy is not getting anywhere very fast, and that the remedy is the assumption by boards of education of their share of responsibility for the operation of equipment. Some of the things about which little is known are: proper thermostat location, thermostat characteristics, variation of effective temperature throughout the room, air distribution, permissible air movement, and ozone. There is need of the development of a higher grade operating

staff and some means of assisting school boards in smaller cities which cannot maintain adequate staffs. The solution of the problem is certainly not to be finally arrived at by any such set of recommendations as those included in the report of the N. E. A. and American Medical Association editorially discussed in the *Educational Measurements Review* in September, 1926. This set of recommendations, favoring window ventilation with indirect heating and teacher control, shows the results of superficial thinking and overreadiness of professional bodies to accept the dictates of academic authority. It is also the opinion of the writer that Lewis³⁴ was right when he said that the importance of this subject is exaggerated. It seems possible that the chief importance of school ventilation may lie in the securing of comfort for the pupils and teachers, and that this comfort is to be secured purely for its own sake and not to assist in mental or physical effectiveness.

There may be some unknown advantages to be gained from window ventilation which we shall incorporate into the improved mechanical systems of the future, but it is a mistake to attempt to cure the evils of an imperfect system by discarding it entirely and substituting one that possesses more disadvantages than the one it supplants. Window ventilation is not the final answer. Just to the degree that ventilation is needed, just to the extent that we believe in its importance, to that extent we must have a system that can be depended on to provide clean, wholesome, comfortable air independent of teacher control and in all kinds of weather.

³⁴Lewis, S. R., "School Building Ventilation," *Heating and Piping*, 1: 494-6, October, 1929.

NEW STANDARDS FOR SCHOOL LIBRARIANS

The New York State Commissioner of Education has recently announced new regulations for the certification of school librarians to meet a demand for higher standards for public-school librarians. The regulations are based on the New York state plan for the certification of teachers and the standards of the board of education for librarianship of the American Library Association and went into effect immediately. They read as follows:

1. Certificates for school librarians shall be of two grades, namely, the school librarian's permanent certificate, and the limited certificate, issued to applicants having the qualifications prescribed.

The librarian's permanent certificate requires the satisfactory completion of four years' work in an approved college or university, including eight semester-hours of work in the science of education, supplemented by one full year's work in an approved library school.

The completion of a four-year course, including eight semester-hours' work in the science of education in an approved college or university, in which one year's work is in the field of library science, or

The satisfactory completion of a four-year course, with a major in library science, in an approved college for teachers, or

The satisfactory completion of a 96-hour course in an approved teacher-training institution, with a major in science included, or a full year's work in an approved library school, supplementing a 96-hour course in an approved teacher-training institution.

Beginning with Sept. 1, 1933, each candidate for a school librarian's certificate must present evidence of the satisfactory completion of four years of approved training, including a major in library science. Certificates issued prior to Aug. 1, 1930, will be continued in force and will be renewable without advancement in grade.

NEW YORK BOARDS TO MEET

♦ The officers of the Associated School Boards and Trustees of New York State are completing plans for the annual meeting of the association, to be held October 13 and 14, at Syracuse. An exhibit of school supplies and equipment will be held in connection with the meeting.

²³Lewis, S. R., "School Building Ventilation," *Heating and Piping*, 1: 494-96, October, 1929.

²⁴Willard, A. C., "Schoolroom Ventilation," *Heating and Piping*, 1: 439-40, September, 1929.

²⁵Bryce, Peter H., "Symposium on Schoolroom Ventilation," *Heating and Ventilating*, 25: 84-6, December, 1928.

²⁶Rush, Dr. J. E., "Rational Schoolroom Ventilation," *SCHOOL BOARD JOURNAL*, 73: 52, 146, September, 1926.

²⁷Howett, Jno., "Heating and Air Conditioning in the Hugh Manly Jr. High School, Chicago," *Heating and Piping*, 1: 109-14, June, 1929.

²⁸Foster, Charles, "Ventilating a Large High School in Duluth," *Heating and Ventilating*, 26: 60-66, August, 1929.

²⁹As quoted in an editorial in *School and Society*, 20: 154-56, August, 2, 1924.

³⁰Duffield, Thos. J., "School Ventilation Study in Syracuse," *American Journal of Public Health*, 18: 326-30, March, 1928.

³¹McClure, J. R., *op. cit.*, p. 94.

³²Willard, A. C., "Schoolroom Ventilation," *Heating and Piping*, 1: 439-40, September, 1929.

³³Walker, J. H., "A New Slant on School Ventilation," *Heating and Ventilating*, 26: 59, July, 1929.

Teacher Demand and Supply in the Public Schools

The Need of the State for New Teachers

Frederick L. Whitney, Director, Department of Educational Research, Colorado State Teachers' College

The actual relationship of the demand for public-school teachers and the supply of them available has been difficult to determine accurately in any area.

The 1924 National Education Association Committee on the Problem of Tenure received from state superintendents' estimates of the number of teachers replacements required to fill the ranks of those leaving the profession. For all states, the total range was from 47 per cent of all teachers in Wyoming to 5 per cent in Florida. Colorado's figure was 10 per cent. If the number of new teachers reported in the present study as appointed in 1926-27 (1,050) be compared with the total number of Colorado teachers (9,512), the per cent of replacement amounts to 11.1.

McCrory¹ reports having received estimates from state education offices of new elementary teachers needed for the school year 1924-25. In 11 states, when the rural schools were not considered, demand exceeded supply; and in 17 states the supply was larger than the needs. Colorado was included in this latter group. His checking seemed to show that there was a shortage for that year in the south and west and an oversupply in the central and northeastern states, while in the east the teacher market was characterized by an economic balance.

In 1925-26, Miss Miller² of Denver secured reports on the length of service of eight types of teachers in Colorado. While tenure reaches a total of 15 years in about 100 cases out of nearly 5,000, the central tendency is clearly between two and three years, elementary-school principals serving longest (3.5 years) and rural-school teachers not more than a single school year. The three large cities of the state are not included in this report. This omission no doubt reduces the averages. But, if the length of service were three or four years, this would be less by two or three years than the mean tenure of large groups of teachers as determined in several fields, where it has reached at least five or six years.³

If five or six years be taken as the figure for

tenure, 1,500 to 1,900 new teachers would be needed in Colorado to take care of annual replacements. If three years be taken, over 3,000 would be needed.

The reports from the administrators of first- and second-class school systems and from county superintendents show (Table I) that 643 inexperienced teachers were appointed in 1926-27, 260 from other states, and 49 who had been out of teaching for a period of at least six months. This is a total of 952. This takes no account of possible vacancies remaining unfilled by regular teachers. An attempt was made to get reports on this in the Ohio study⁴ and on

forces against the relatively unorganized, inefficient public schools of the state.⁵

In these situations, where lack of supervision makes a high type of individual capacity and skill in teachers imperative, the largest number of newly appointed young teachers without any background of experience are found. Salaries and living conditions must be improved before this sore spot in our school system can be cured. Item 2 shows a balance the other way in favor of the larger units of administration in first-class districts, when the older experienced teachers coming from outside the state are counted. Nearly one half of all of the more

TABLE I - NEW TEACHERS OF SIX TYPES APPOINTED IN THE STATE OF COLORADO

Types	1926-27										
	First Class Districts			Second Class Districts			Third Class Districts			Total	
	Men	Women	Total	Men	Women	Total	Men	Women	Total		
1	2	3	4	5	6	7	8	9	10	11	
1. Inexperienced	22	68	90	24	76	100	42	411	453	643(a)	
2. Experienced outside Colorado	20	106	126	7	44	51	14	69	83	260(a)	
3. Experienced in Colorado, but not for six months prior to appointment	1	21	22	3	14	17	0	10	10	49(a)	
4. New to present system	23	165	188	40	119	159	80	412	492	839	
5. New in rank	3	16	19	0	0	0	1	5	6	25	
6. New in type of teaching position	1	4	5	1	2	3		1	1	9	
Total	70	380	450	75	255	330	137	908	1045	1825	

a. No estimate is made of possible vacancies remaining unfilled by regular teachers.

the basis of proportions found there the Colorado figure might be raised to at least 1,050. This would represent Colorado's annual teacher needs based on the reports of newly appointed teachers for the school year 1925-26.

An examination of item 1, Table I reveals the fact that 70.5 per cent of the inexperienced teachers are needed in the smaller and rural schools in third-class districts. This is significant as showing the discrimination of economic

⁴Buckingham, B. R., *Supply and Demand in Teacher Training*. Bureau of Educational Research Monograph Number 4. Ohio State University, Columbus, Ohio, 1926.

capable teachers drift to the cities and towns where they are least needed. "To him that hath shall be given —." As one would expect, more than one third of the experienced teachers who are coming back into teaching after an interval of absence (Item 3) are found in first-class districts. But they are only a small part of items 1, 2, and 3 (5 per cent), while inexperienced teachers constitute 70 per cent, and outside teachers the remainder (27 per cent).

When the total of items 1, 2, and 3 is increased to 1,050 to represent the probable replacement needs in Colorado, the figure is some larger than the total of items 4, 5, and 6. These figures refer to shifts of the teacher population within the state, and are administratively important as each unit represents an item of school business. Practically all of this total consists of teachers who have moved from one community to another (item 4), and 59 per cent of these are in the smallest schools (column 10). Evidently there is a spirit of unrest in our public-school faculties which causes many to be on the move at the close of each annual period of contract. No doubt a large element in this attitude is an urge toward the improvement of professional status. In the present pioneer disorganized condition in our national public schools, it is impossible except in the unusual large-city system to make a life career, as a sixth-grade teacher for example, in one locality. Teachers must move into other situations where better social, salary, and professional advantages are offered. Otherwise, they will stagnate and become relatively inefficient.

⁵Whitney, F. L., *High School Opportunities in Colorado*. Research Bulletin Number 12. Colorado State Teachers College, August, 1927.

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TABLE II - NUMBER OF TEACHERS OF THREE TYPES NEWLY APPOINTED IN OHIO,

WISCONSIN, AND COLORADO

Items	Inexperienced		Experienced outside of the state		Experienced in the state, but not for six months prior to appointment		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
	1	2	3	4	5	6	7	8
1. Wisconsin(a)	2855	32.2						
1922-23								
2. Ohio (b)	3643	65.1	804	14.4	1146	20.5	5593(d)	100.0
1923-24								
3. Colorado	643	67.5	260	27.3	49	5.2	952(d)	100.0
1926-27								
4. Ohio (c)	4660	70.1	786	11.8	1200(e)	18.1	6646(e)	100.0
1926-27								

- a. Anderson, C. J., *The Status of Teachers in Wisconsin*. Department of Public Instruction, Madison, Wisconsin, 1923.
b. Buckingham, B. R., *Supply and Demand in Teacher Training*. Bureau of Educational Research Monograph Number 4. Ohio State University, Columbus, Ohio, 1926.
c. Myers, A. F., *A Teacher-Training Program for Ohio*. Contributions to Education, Number 266. Teachers College, Columbus, Ohio, 1927.
d. In Ohio, there was an estimate of 775 vacancies remaining unfilled by regular teachers, raising the figure 5593 to approximately 6368. A like proportion added to 952 would raise Colorado's annual teacher needs to at least 1050.
e. Estimated.

The Motion Picture and the School

B. A. Aughinbaugh, Columbus, Ohio

Man first communicated his messages by gestures, which were later supplemented and almost supplanted by speech. The gesture remained very powerful as a means of expression, however, for we find Demosthenes stating that they are the first, second, and third most important factor in efficient oratory. But, neither gestures nor speech could be recorded by early man, since the one died with the effort which produced it, while the other ended with the breath which gave it birth. Records are essential to overcome time and space, two things with which man has ever contended, and so he set to work developing means whereby records might be made. He first sketched his gestures in sand and later on wood, bone, and stone. Thus were pictures born. But, these pictures failed to express the continuity given by the active verb of speech, or the motion of gestures. Without the ability to express motion, the expression of thought is restricted. Moreover the pictures showed everything as having taken place—it was impossible for them to show things as taking place and man, who lives in the present, longs to relate of the present. To attain a semblance of action the pictographs gradually changed to ideographs, which are pictures of ideas. These, in turn, changed to phonographs, which are pictures of sound, and these to alphabets which are collections of sound symbols. The ideograph continues to live in the Chinese writing, and the phonograph in the Japanese.

When man changed from picture writing to alphabetic symbols, he changed from artist to poet. No longer did he make real pictures, but he made word images instead. The latter contained very little detail, such detail being left to the reader to supply from his own experiences, should he have any for this purpose. Poetic expression gradually ascended, until it reached its climax in William Shakespeare, the greatest poet of all times. The word pictures of Shakespeare are magnificent sketches with world-bounding outlines. Their meaning varies with the experience of the reader and thus it is that so powerful a phrase as, "I dare do all that may become a man, who dares do more is none," means one thing to the youth, another to the mature man, and a third to the aged. Teeming with significance as it is to the experienced, it makes no impression on the inexperienced.

The Beginning of Science

Contemporaneously with Shakespeare came Francis Bacon, who gave to the world the idea of inductive reasoning. This was the beginning of science, and from that moment the star of poetry began to wane in exact proportion to the ascendancy of the other. The scientist required detailed facts. His expression could leave nothing to be misunderstood. Newton's laws of motion must be expressed in such terms that they mean the same to the youth as to the mature man. Sketchiness is taboo. The scientist told things, whereas the poet told about things. There is a vast difference. In one case we are given the experience from which we produce thoughts, while in the other we are given thoughts which we interpret by experiences. It is true that, in the first case, thoughts may not be forthcoming, but it is at least equally true that in the second case the experiences suitable for interpretation may never be encountered. There is no denying, however, that the former process more nearly fits the definition of education than the latter. It is a topsy turvy type of instruction, which gives only grafted thoughts and sends the child forth into the world for

experiences with which to interpret them. This is a scientific age—that cannot be denied. Carlyle told us years ago that there would be no more great poets since there was not the environment to create them. This age demands things—not thoughts about things.

The Beginning of Photography

When science sought to use poetic forms of expression, namely the word picture and figure of speech, it felt itself cramped, and therefore sought to supplement these sketchy word images with real pictures. At first, such supplements were limited in number, since pictures were difficult to draw. To correct this condition, men sought feverishly to fix the image of the camera obscura, and so attain a short cut to picture making. Daguerre and Fox Talbot were successful in this search and photography was born. But science demanded something more than a supplement, it demanded the pictorial equivalent of the active verb so that processes might be portrayed. It is strange, considering how many persons were working on this problem, and how earnestly they were searching, that the motion picture was not found many years before it was. In the 90's it finally came forth, a new and fair flower on the long-growing tree of communication. The world at once took it to its bosom, because it answered the longing of a million, million years. It was the form of communication which man sought to create in the very beginning, and from which he was switched by his lack of skill. Picture palaces filled all the lands and the motion picture became what it really was, a universally understood form of communication. It not only carried the appeal of motion found in the active verb, but it was *light*, or visually transmitted, it carried through the eye to the brain. The oral or printed word being sound or aurally transmitted always raised the complaint from man that "only seeing was believing" and "one picture is worth a hundred tellings." Speech, oral or written, is auditory and not visual and, just to that extent, lacks the essential authority which one's eye gives. It is hearsay evidence at best.

The School and the Motion Picture

In spite of its popular success the school did not readily accept the motion picture. There may be other reasons for this but probably the main one was due to a condition peculiar to the school itself. Nowhere else do we find the works of the poets rubbing elbows with the natural and social sciences. For many years have these contended for a place in the school sun. Whether to teach the classical, or the scientific, is still a mooted question with school authorities. Shall we retain Latin is a question which has caused many a school superintendent to lose sleep. Therefore, to be so bold as to throw overboard that classical chart—the printed word—has been indeed unthinkable. But, the printed word is only a chart and the school authority unconsciously so recognizes it by ever increasing the number of illustrations on the printed page. Each of these illustrations is an acknowledgement of the limitations of word images. These still pictures are but crutches or possibly patches, as it were, to make the old cloth hold out a little longer. True, they are better crutches than figures of speech, but they are crutches nevertheless. To those who regard only a "well-read" man as educated this may be sheer hearsay worthy perhaps of professional death at the stake of ridicule.

While the school lingers and debates, the

world moves on. Already evolution has resumed its onward march. The personal, living word has taken the place of the symbolic form along with the motion picture. The world has accepted and welcomed this innovation. There remains but one step to complete the cycle. This is the solution of the problem of convenience—a problem which usually comes in any given period of an evolution. Small projectors have come to serve the home and office, and the school if the latter will accept them. But this is not the end. Before the motion picture can serve as an adequate medium of communication it must attain the convenience of the printed page. Some tell us that this it will never do. But "never" is a long time and the persistence with which men tackle even the impossible, such as perpetual motion, shows that "no" is not considered as an answer. Already small direct-viewing motion-picture devices are beginning to appear. These may unchain the motion picture from the wall and transfer it from the group to the individual in a convenient way, just as the printing press unchained the book from the wall and transferred it from the group to the individual. Man does not desire supplements, but he longs for labor and time-saving substitutes. To him supplements mean more time and more effort, but acceptable substitutes save both. The motion picture is undoubtedly a timesaver and psychologists tell us that it is also a labor-saver, since it sets aside the difficult mechanics involved in reading and frees the mind for thinking.

Those who consider reading essential to thinking overlook the fact that every age has produced good thinkers who could neither read nor write. Then, too, there was a time when writing was considered as great an essential as reading—good schooling was based on the three R's, but typewriters and calculating machines have limited the value of two of these R's; perhaps the third "may profit by their example." Tools are merely a means to an end and the motion picture is merely an improved tool like the typewriter and the calculator devised to meet the needs of the present age. It saves time and labor—the labor involved in the mechanics of reading, "for which," says Huey, "the human mind was never intended."

With this evolution going on, the schools cannot afford to tarry long. Even now they have lost much of their one-time prestige. When the boy or girl learns something more of geography, history, biology, physics, and so on, from the theater around the corner than he does from his school, the latter is bound to suffer in his estimation. Institutions which fail to keep abreast of the times are swiftly passed. Like China, we cannot worship the past without endangering our position in the present. It is well to remember the past, and consider what has gone before, but to worship bygone methods, tools, and forms, is to court stagnation and death.

We are not concerned with putting across the printed page, but merely the message of the printed page, and if anything in the fullness of time can do even a part of this work in a more efficient way than it has been done in the past, common sense dictates its immediate adoption.

The motion picture may never take the place of the printed page nor the teacher, but if it does not, it will be because these continue to function efficiently and not because of editorials, orations, or other things denouncing the motion picture and ridiculing its abilities and possibilities. What is to be the future of the motion picture lies hidden in the womb of time,

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The Humor of the School

Edwin J. Brown, Kansas Teachers' College, Emporia

Tell me not in idle jingle,
Marriage is an empty dream!
For the girl is dead that's single
And things are not what they seem.
—Phoebe Carey.

It was many and many a year ago
In a district called E.C.
That a monster dwelt that I came to know
By the name of Cannibal Flea
And the brute was possessed by no other thought
Than to live—and to live on me!
—Thomas Hood, Jr.

After twice committing suicide Cowper lived till 1800, when he died a natural death.—*Student's Answer.*

Mark Twain was talking to a man who owned a dachshund one day, and Twain studiously avoided looking at the dog. Somebody asked him why he acted as if he hadn't seen the dog.

"Because," replied Twain, "I was afraid the owner might be sensitive about having it."

An English writer who sought an answer to the question "What is Humor?" confesses that he read a philosophic French treatise on the subject, but gained nothing from it except a fascinating extract from Mark Twain. "The philosopher," he writes, "seems to have been baffled altogether by the oddities and contradictions of the thing we call humor just as some great doctors have admitted that they cannot make anything of chilblains."¹ It is a generally accepted fact that humor is a singularly elusive thing, which can hardly be explained. However, its very elusiveness gives it something of its charm; and, moreover, the illustrations which are necessary to an inquiry into the nature of schoolroom humor, its characteristics, and utility, are likely to be amusing without being irrelevant. The quotations given at the head of this paper are illustrations of different types of humor. Two are parodies of great poems, written, we are told, while in the classroom by Phoebe Carey and Tom Hood, Jr.; one is an extract from an examination paper; and still another is a story which the late Thomas R. Marshall said never failed to make him laugh.

Although it may be undefinable, there is little doubt that humor exists, and that it exists in different peoples in different quantities. Humor in the young is inclined to be restricted in its scope, probably due to the limited experiences of life. It is commonly said to be quicker in women than in men, but shallower; in the Scotch, it is reticent; in the Irish, it is voluble and refined, but friendly. Wherever it is found free from alloy, wholesome and contagious, it appears to be the offspring of man's heaven-bestowed power of seeing in the baseness of earth the true presence of the Divine.

Humor an Aid to the Teacher

There seem to be six main purposes served by humor, which benefit the teacher:

1. As a reliever of pent-up nervous energy; commonly called "nerves."
2. As a tonic and a stimulant for tired mental faculties.
3. As a saving factor in embarrassing, trying situations.
4. As a personality developer.
5. As a buffer for poor personal appearance.
6. As an aid to classroom efficiency.

When the first purpose is considered, the conclusion seems justifiable, that the view of many psychologists, that laughter and tears come from the same source, is true. Persons who feel keenly often laugh to forestall tears. Someone has wisely said that, if humor is to serve its largest purpose aside from cheering us, it is to prevent us from being imposed upon. The humorist does not take things too seriously, and

never tragically. Seeing the humor in a situation has saved the nerves of many a teacher from snapping.

The old saw that "an apple a day keeps the doctor away," has been changed by Irvin S. Cobb into "a laugh a day keeps the doctor away," and need but be applied to the tired mental faculties of the harassed teacher, to convince her that there is a tonic effect in laughter.

The third purpose which humor serves is to relieve tense situations. There is no experienced teacher who cannot recall at least one situation which was immeasurably relieved by being laughed at. The person carrying heavy responsibility must needs have some safety valve, and the forgetting of troubles through some form of humor, although it may be but temporarily, is often the saving means. All situations in the schoolroom which develop from ill-temper melt away when exposed to the bright sunshine of humor.

Has anyone ever known a person of unpleasant personality who has a keen sense of the humorous? The question is asked in good faith. There seems to be a clear distinction between wit and humor, and the witty person is often displeasing. Wit often flashes and stings; humor tends to soothe and comfort. The life of Lincoln affords a notable illustration of the saving power of humor. Lincoln was serious and, we are told, inclined toward the morbid. His sense of humor redeemed the situation. Although the depth and greatness of his nature was often misunderstood and his humor was accounted a weakness, yet, there seems reason to believe that one of his great attractive qualities was the personality, so developed, that he could tell a humorous story while the crucial battle of Gettysburg was being fought, and could later show the true depth of his feeling and the intensity of his thought, by giving to the world on that same battlefield, the Gettysburg Address.

As an adjunct to teaching efficiency the wide-awake teacher soon learns to gather humor of the pure type in the form of good stories for use in her classroom. Just as a fifteen-minute recess often releases pent-up physical energy, so does a fine bit of humor react on the nervous tension so often present in the classroom.

While teaching is serious work, yet there are few persons who would say that a sense of humor is a weakness in a teacher and will hinder the effectiveness of her work. Humor at times may seem to be an enemy of that vehemence of purpose so necessary to carry a difficult task to completion. But it must be remembered that wherever humor goes, it takes with it human nature as its fellow, and even the idealist's cause must fail if he attempts to hurry forward where human nature cannot or will not follow. From this one gathers that the comic spirit may be of service to overconfident idealists, which teachers are prone to be, if it reminds them that, after all, they are fallible men and women in a world of fallible boys and girls.

Utility of Humor to the Supervisor

The supervisor has learned through much experience that Edward Herriot's statement that everything in life should be taken seriously, but that nothing should be taken tragically, is directly applicable to teachers and teaching. The supervisor to be really successful must have a true sense of humor. Someone has said that a man without a sense of humor is occasionally to be respected; often to be feared, and nearly always to be avoided. If he be a writer of books, he may even be a Milton; if he be a man of

action, he may be a Napoleon; if he be a table companion, he is sure to be a bore. It might be well to add that if he be a school supervisor, he is likely to be despised and hated.

Humor Opens Way to Constructive Criticism

The writer worked for a year with a supervisor who had a fund of clever stories applicable to the schoolroom and schoolroom situations which he had gathered from years of experience with boys and girls. Most of the stories were humorous. How easy it was for that supervisor to correct a teacher in an error, to suggest better methods, to criticize constructively, after he had first cleared the mind of cobwebs of distrust and dislike for supervision by telling one of his stories, which so admirably fitted the situation under discussion. This does not mean that "story-telling supervision" can ever take the place of clear-thinking, constructive work on the part of the supervisor. It does mean that his approach is much surer and more effective if there is a sense of humor in his mental make-up. To keep the teacher from taking her work too seriously, and to keep the supervisor from taking himself too seriously, is one of the most useful things which a keen sense of humor can do for its possessor.

And what has been said of humor as an aid to the supervisor may be said of the superintendent of schools. The chief executive of a school system needs humor as a constant aid in his burdensome office. Anyone who has followed the annual meetings of the Department of Superintendence will remember that the presidents of this organization have invariably been men who, in the conduct of the meetings, could and did use humor—very clearly a carryover from their daily habit of work.

The Morale of the School

It was but twelve years ago that the word "morale" was found in every newspaper, was seen in gaudy posters, was heard from the lips of every war-time speaker. The word, whether applied to the men in military service or to the folks who carried on at home, had a significant meaning. That same meaning is equally applicable to the thousands of men and women who make up the great army of educators. There is a morale of the schoolroom. It is not a constant thing; it flows and ebbs, and varies from year to year. That much of the yearly turnover among teachers is directly due to the lack of a high morale, is probably stating an obvious fact. The part which schoolroom humor plays in securing this "mental rightness" is difficult to analyze, but that it does play a prominent part few doubt.

There are, according to Margaret M. McLaughlin,² three reasons for so little reading of anything of a humorous character in the schools: (1) Education in the past has generally meant a discipline in the unpleasant. (2) Theories regarding humor have put it beyond the pale of respectability so far as the young are concerned. (3) Teachers have feared to introduce the spirit of humor into the school, since government is supposed to be in danger when the governed develop the spirit of laughter.

The first reason may be dismissed by saying that courses of study were often shaped on the unconsciously dominant idea of determining what pupils disliked and of giving them much of it. The second reason is borne out by philosophical expressions of the past. Plato advised his friends that it is not philosophical to laugh

¹E. Lyttleton, *The Nineteenth Century*, July, 1922.

²*Educational Review*, September, 1923.

loudly. Quintilian says, "A saying which causes laughter is usually based upon false reasoning, and has something in it which is low." The third reason, that teachers hesitate to introduce humor into the classroom, recalls the fact that a large part of one's teachers in the past feared humor by the students and carefully avoided it on their own part. The teachers that one laughed with, rather than at, stand out in bold relief. Colvin says, "Solemnity is always a foe to laughter, and tyrants and school teachers tremble at the manifestations of mirth, the surest indication that they are no longer taken seriously and that their fall is at hand."

There are many indications that a new spirit has developed in the modern school, and that a new conception of humor has replaced the old. Carlyle said that humor is not contempt; "its essence is love." Sully calls humor man's best friend. A very modern writer says that humor is an indispensable shock absorber in life. Colvin asserts that the perception of humor is a sure indication of mental alertness: "To educate in humor is to furnish a liberal training; to harmonize. The teacher can have no higher ideal than that of teaching his pupils to laugh aright; for he who laughs well, laughs wisely, laughs magnanimously, laughs highly. He who laughs well has high knowledge, sympathy, and philosophical calm."³

That there is decidedly a humor of the schoolroom, that is a humor which is peculiar to the schoolroom, is evinced by a study of the stories written about the schoolroom which appear in THE SCHOOL BOARD JOURNAL. The part of this magazine given over to humor is of a highly selective character, drawing upon publications in Europe as well as America, and including newspapers as well as magazines. A total of 45 editions were studied, containing in all 505 jokes. The jokes were grouped or classified as follows:

1. Teachers are joked about most of all. From the entire list 80 jokes were on the teacher. Six were on the absent-minded professor, 3 on the teachers' association, and 1 on the Sunday-school teacher.
2. Next to teachers, parents are joked about the most. Of the total number, 60 were about parents having children in school. These covered every possible type of humorous imaginings.
3. The third largest group is about students, there being 58 jokes listed in this class.
4. Fifty-four jokes were classified under the heading of "child's reasoning," an example of which is:
Teacher: "What is the highest form of animal life?"
Little Boy (quickly): "The giraffe."
5. The school itself is joked about 40 times. School conditions, teaching, etc., were the subject material.
6. Fifty-two jokes were clever replies to questions of teachers.
7. Thirty-seven jokes were classified under the heading of school subjects: history (9), composition (5), arithmetic (3), etc.
8. Eighteen of the jokes were about school directors.
9. Sixteen of the jokes were about the educational system as it now exists in the United States.
10. School discipline was satirized in 12 of the squibs.
11. There were 6 school jokes about American government.
12. Six jokes concern health conditions, dealing primarily with cleanliness.
13. Home training is mentioned in 6 jokes.
14. Sportsmanship breaks into print 6 times.
15. National prohibition appeared as a subject in 4 jokes about college students.
16. The honor system was the victim of 3 puns.

17. Slang and jazz were the subject of 3 jokes.

18. Truancy was joked about twice.

Schoolroom Wit and Humor

A brief study of a collection of school-life incidents indicates that the humorous affairs of the schoolroom seem to fall into five classes. These classes might be named causes: (1) mistakes in spelling; (2) the results of unsuccessful guessing; (3) anachronisms; (4) the right idea but badly twisted; (5) utter complacency.

Under the first class are found such answers to questions as the following:

The blood in the body is taken by means of tubs to the heart and there detained.

I came sore and conquered.

His brain was teething with grand ideas.

Stored in some trouser-house of mighty kings.

If the earth did not revolt, we should have equal days and nights.

Under the head of unsuccessful guessing these appear:

Question: What do you understand by the following: Pig iron, Bristol board, shoddy, insulators?

Answers: Pig iron is what they make the nose rings for pigs out of. Bristol boards are schools where poor children go. Shoddy is a kind of drink much used in Ireland. Insulators are people who insult other people.

Question: What are the three highest mountains in Great Britain?

Answer: Ben Nevis, Ben Lomond, and Ben Johnson.

Under anachronisms the following are found:

The earliest newspaper of those times was the Anglo-Saxon Chronicle.

When Earl Godwin came back to England from the Holy Land all the people flocked to the station to meet him.

Under the classification of right ideas badly distorted such answers as these are found:

The base of a triangle is the side we don't talk about. The apex of the heart is placed downward and slightly upward.

The subjunctive mode is used in a doubtful manner.

These replies are found under the class of "utter complacency":

Ice—water that went to sleep in the cold.

A lake is a piece of water that the land has grown around.

Congress is a place where they go to Washington, D. C., to talk about taxes.

A lock-out is a man who comes home late.

Snoring is letting off sleep.

The Teacher's Contribution

The teacher who grows, contributes to life, to education. The good story-teller appreciates the joke, and conversely, appreciation tends to express itself; the thought tends to go over into action. For the purpose of her own development, then, the teacher should cultivate the art of contribution. There are many ways in which the teacher can add to the genial atmosphere of the school. No matter how literal-minded she may be, she can at least be cheerful. She may contribute humorous happenings and sayings from the classroom to the school paper and the school yearbook; to the local papers, to chapel programs; and best of all, to classroom teaching.

Making a Schedule of Recitations

D. S. Weller, Principal of the High School, Portland, Ind.

The preparation of a schedule of recitations for a small high school is a process more readily learned in a practical school situation than in a college course in school administration. A successful schedule is invariably the result of complete understanding of a local situation linked with careful planning, and followed by painstaking attention to a series of rather simple steps which, in the slang of the day, must be checked and double checked to guard against mistakes. No two principals will quite agree on the details or devices which will assure an error-proof schedule. However, the writer has found the following method successful in the Portland Senior High School, and worthy of consideration for any small high school.

The Portland high school is not different from other high schools. It is a four-year school in a small city of six thousand. Forty per cent of the 431 pupils enrolled come from the surrounding country districts. Midyear promotions are used, which calls for two schedules of recitations per year. In addition to the usual academic subjects taught in similar institutions, there are courses in the usual vocational subjects.

Procedure in Making a Schedule

During the thirteenth week of the semester, each class is called to the auditorium for a conference on the choice of courses during the next semester. Any questions regarding subjects are answered before the pupils are handed election slips to fill out. Slips are also sent to the junior-high-school principal, who assigns his 8A students to the task of filling them out. After all slips are completed, the number of classes in the divisions of the different subjects is determined.

The number of beginning students of each sex who enter from the rural schools is obtained from the county superintendent. From past experience, it is possible to make a rather good estimate of the number who will take the various subjects. Since there are no midyear graduations, the problem need not be considered in January.

Very little need be said here concerning the distribution of the work to the teachers. The

principal necessarily is acquainted with the abilities and preparation of the members of his faculty. Insofar as possible, he will distribute the work so that the burdens will be equalized and each of the teachers will be happy. In making the assignments, teachers are given only classes which they are fully prepared to teach. Enthusiasm for a subject begets enthusiasm.

The Mechanics of Schedule Making

After the number of classes to be organized is determined, a large sheet of bristol board or heavy ledger paper is obtained and ruled to form rectangles about 2 inches wide and 1 inch high. One vertical column is arranged for each teacher and eight horizontal columns are made, one for each of the eight periods of the school day. The teachers' names are placed at the tops of the vertical columns. Eight different colors of paper are cut into rectangles the size of the spaces on the sheet. The principal is now ready for a game of shuffle.

The 12A classes which are written in rectangles of say blue paper, are placed in the rectangles of the cardboard, under the proper teachers' names. They are placed so that no conflicts will be created. The 12A's are considered first, because all graduation requirements must be fulfilled, and because there are less numbers of sections for the upper classes than for the lower. The same process is continued with the 12B's and on down to and through the 9B's.

All of this is easier said than done. Many changes and adjustments are inevitable and are the reason for the use of the rectangles. The principal sees a conflict immediately, when rectangles of a particular color get into the same line.

At this point, care must be exercised to consider the special conditions imposed by the fact that music, art, and physical-training teachers work in the grades as well as in the high school. In order that their work in the elementary schools may not be interfered with, the high-school classes in these subjects are arranged to

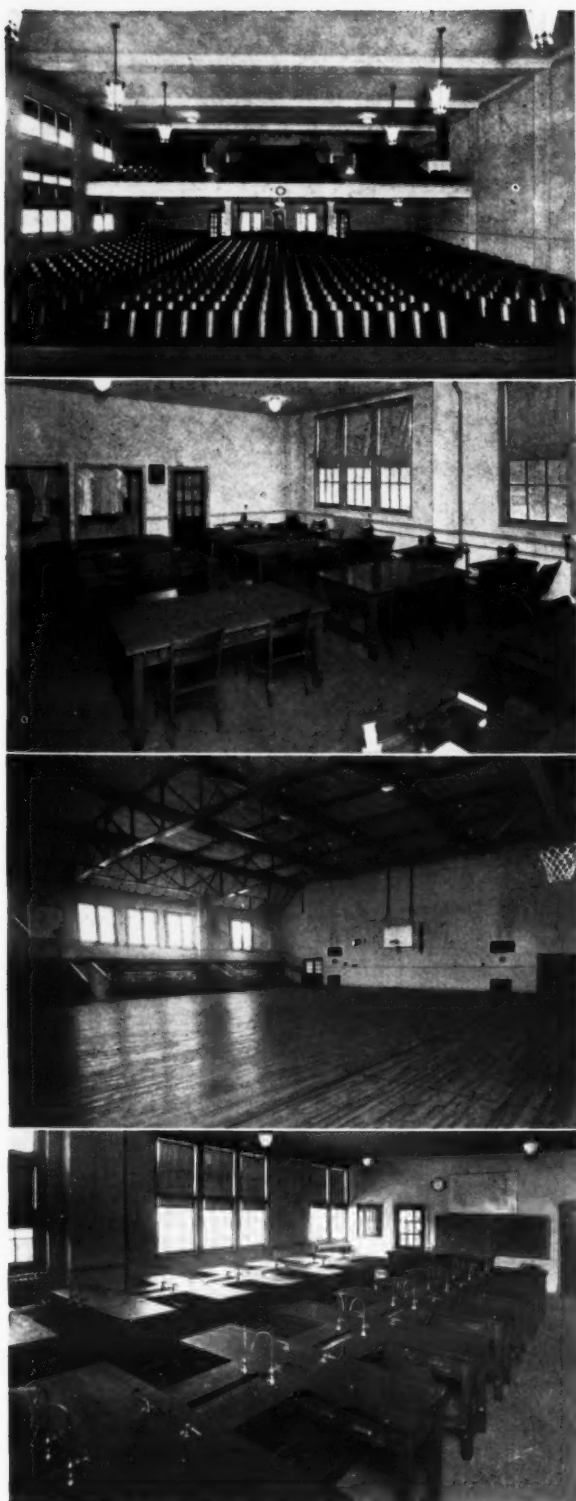
³Colvin, Stephen S., *Pedagogical Seminary*, December, 1907, pp., 417-424.



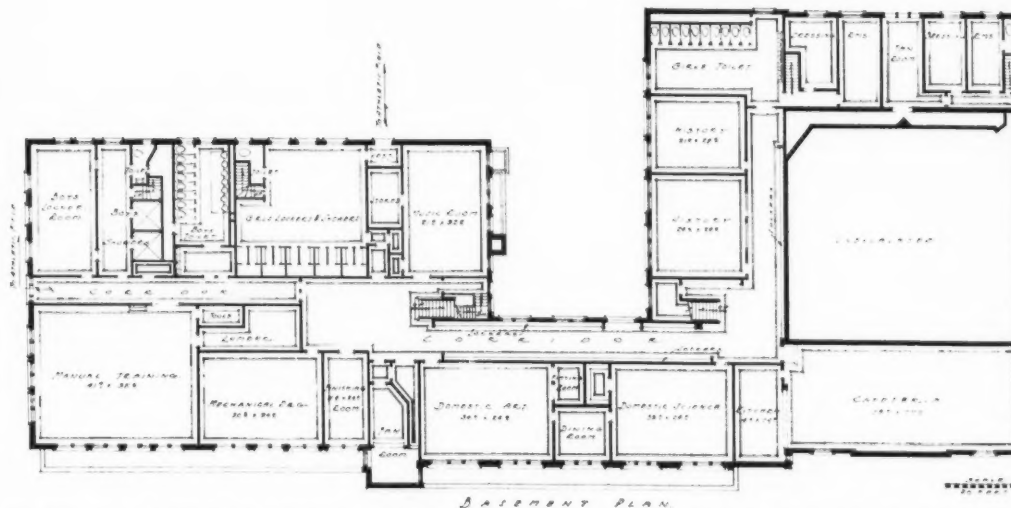
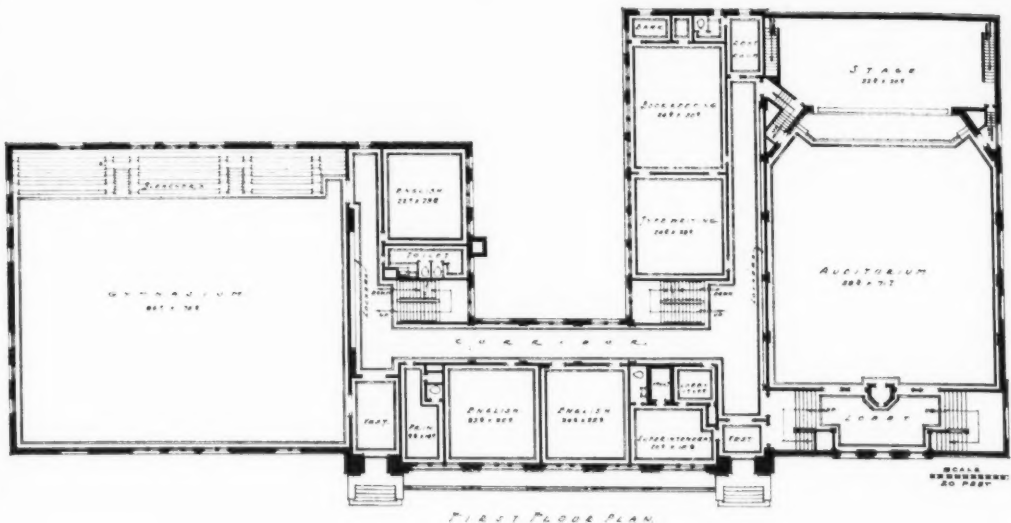
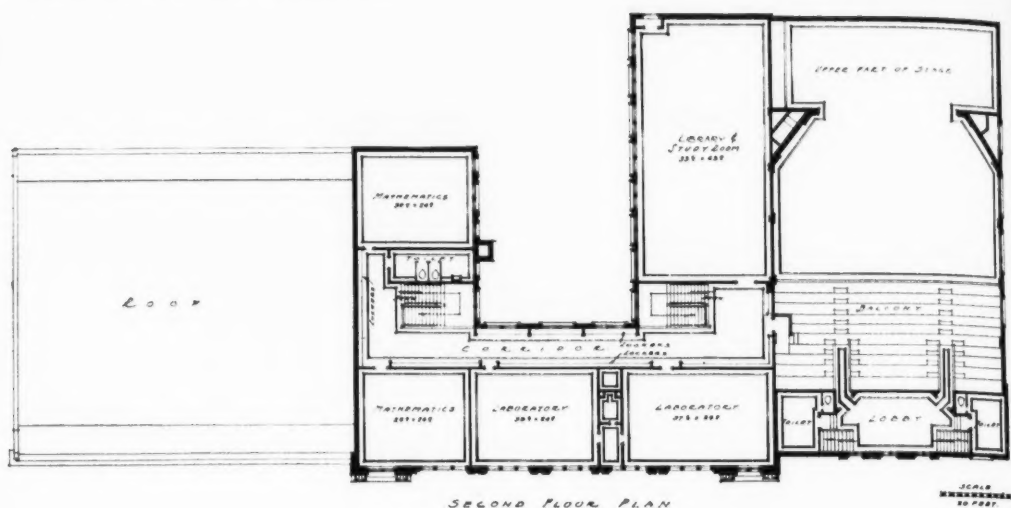
EXCELSIOR SPRINGS HIGH SCHOOL, EXCELSIOR SPRINGS, MISSOURI
Owen, Sayler and Payson, Architects, Kansas City, Missouri



LIBRARY AND STUDY HALL, EXCELSIOR SPRINGS HIGH SCHOOL, EXCELSIOR SPRINGS, MISSOURI
Owen, Sayler and Payson, Architects, Kansas City, Missouri



INTERIOR VIEWS OF THE EXCELSIOR SPRINGS HIGH SCHOOL, EXCELSIOR SPRINGS, MISSOURI
Owen, Sayler and Payson, Architects, Kansas City, Missouri
TOP TO BOTTOM: Auditorium; Home Economics and Sewing Room; Gymnasium; Chemistry Laboratory.



FLOOR PLANS OF THE EXCELSIOR SPRINGS HIGH SCHOOL, EXCELSIOR SPRINGS, MISSOURI
Owen, Sayler and Payson, Architects, Kansas City, Missouri

A BUILDING PLANNED FOR ENLARGEMENT

The Excelsior Springs, Mo., High School

The rapid growth of the community and the necessity of providing for a greatly enlarged enrollment, with a corresponding expansion of the school program, were the basic problems involved in the planning of the Excelsior Springs High School, at Excelsior Springs, Mo. A highly developed athletic field on a level considerably lower than the street upon which the building fronts, and the proximity of important business buildings which made a rather dignified design highly desirable, all were influences which make this building a rather interesting departure from the average high-school plant in a small community.

Bonds for the construction of the building were authorized at a special election in October, 1928, and the construction of the building was begun in 1929. The building was completed late in 1929 and was fully occupied before the second semester in February, 1930.

In planning the building, the board of education considered itself justified to arrange for an auditorium seating 1,200 persons and suited to the needs of the ultimate expected enrollment. The building is located within four blocks of the Elms Hotel, one of the large health resorts of the community, and there is a constant demand for the use of an auditorium for conventions and other gatherings, which contribute largely to the prosperity of the community. The auditorium is quite complete for school purposes, and its use by outside organizations returns at least the cost of operation and maintenance.

A second feature of the building is the gymnasium, which was also planned for the ultimate capacity of the school. Like the auditorium, the gymnasium has separate entrances from the street and can be used for community purposes. It is closely correlated with the athletic field and the playground.

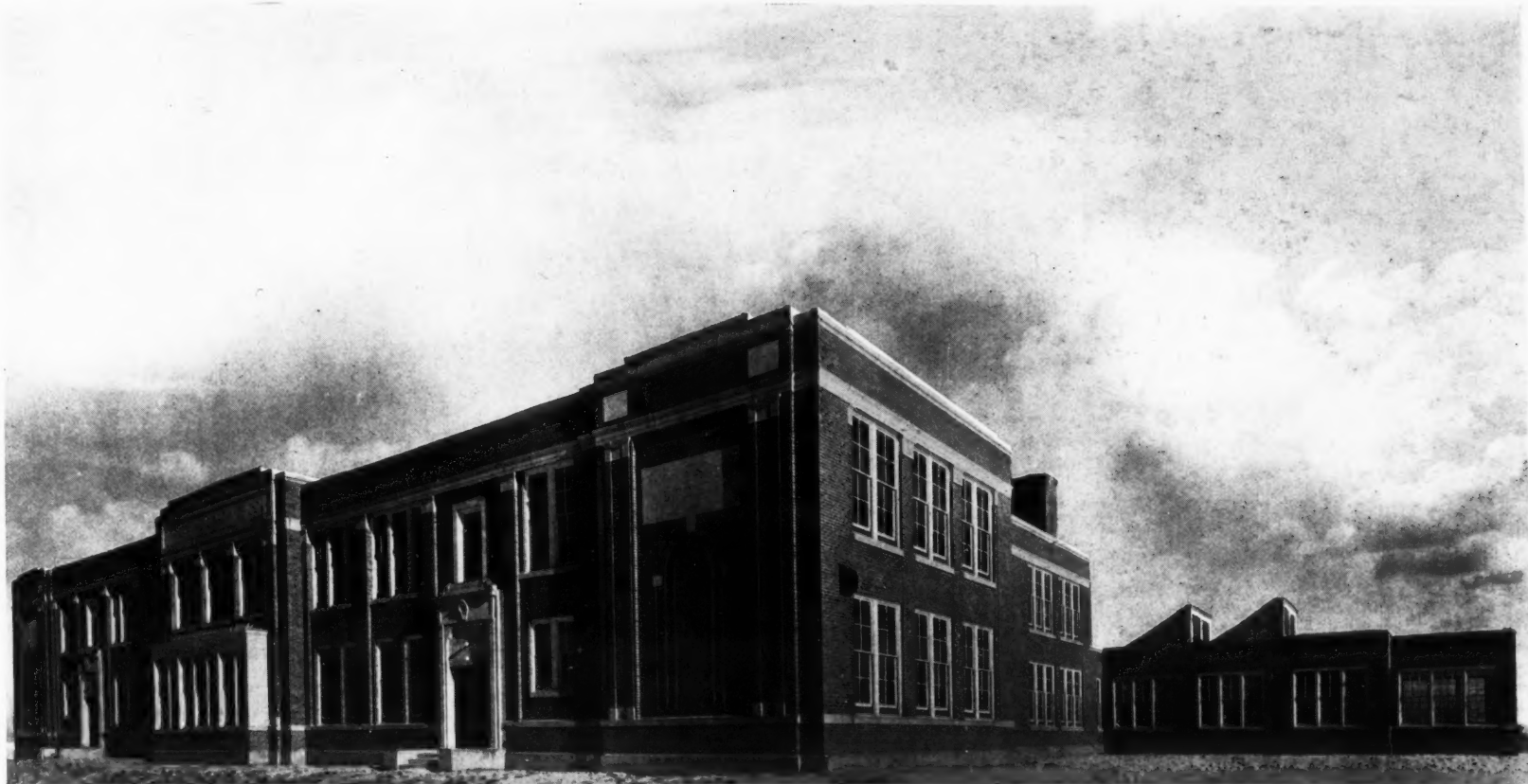
The heating and ventilating apparatus and space for the janitor are contained in a sub-basement under the gymnasium portion of the building. The basement so called, which is en-

tirely above grade at the rear of the building, contains three classrooms, shops, a drafting room, a suite for domestic science, and a large cafeteria.

On the first floor there are three classrooms, rooms for the commercial department, an office for the principal, and a suite for the superintendent of schools. On the second floor there are two classrooms, two laboratories, and a large library, which serves also for study purposes.

The building is constructed of concrete, brick, and steel. The exterior is quite dignified, with its modified English Georgian details, which are based on the best work of the Brothers Adam and carried out in buff terra cotta. Fireproof materials have been used throughout, except for a small amount of wood trim. The floors are of concrete or terrazzo. In the classrooms the floors are covered with linoleum. In the shops, the gymnasium, and other places, hard wood has been used for the top floors. The walls are plastered, and acoustical treatment has been applied in the auditorium and other noisy spots.

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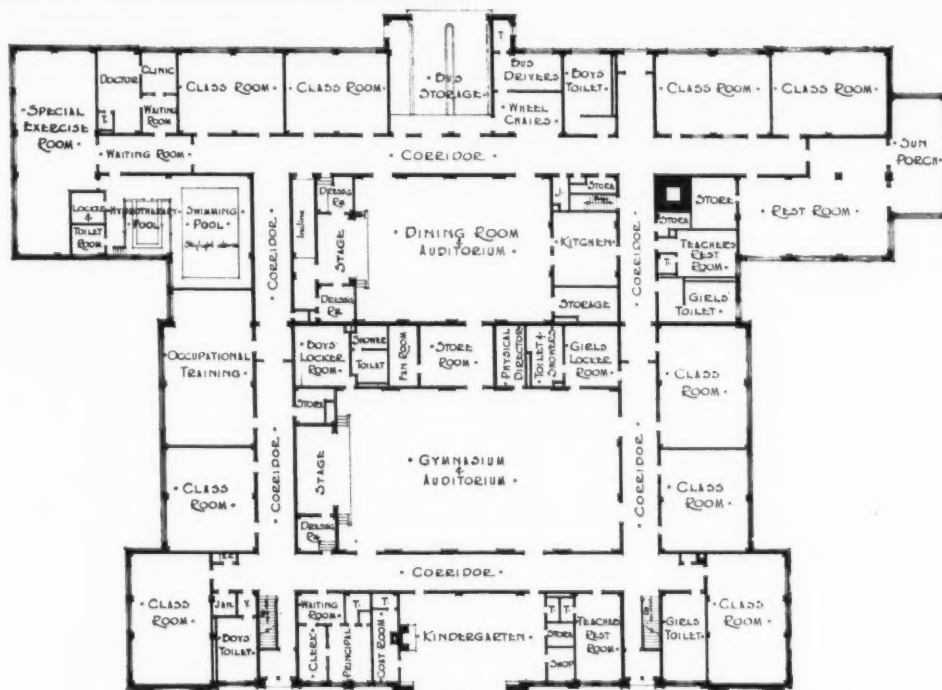


PERCY M. HUGHES SCHOOL, SYRACUSE, NEW YORK
Randall and Vedder, Architects, Syracuse, New York

A COMBINATION SCHOOL FOR NORMAL AND CRIPPLED CHILDREN The Percy Hughes School, Syracuse, New York

The education of crippled children has received increased attention during the past decade, and a number of interesting solutions of the problem of housing classes of these unfortunates have been offered by the larger cities. In some communities, small buildings planned and equipped solely to handle crippled children have been found desirable, but other cities like Syracuse, N. Y., have found it educationally and economically advantageous to erect combination buildings for normal and crippled children. The combination buildings do not entirely separate the crippled youngsters from their normal brothers and sisters, but they provide contacts which are extremely beneficial for the immediate educational objectives of the school and for the future lives of the children. In a combination building such rooms as shops, administrative offices, etc., can be shared by both schools.

The new school building which houses both normal and crippled children in the city of Syracuse, is very fittingly named in honor of the



FIRST FLOOR PLAN, PERCY M. HUGHES SCHOOL, SYRACUSE, NEW YORK
Randall and Vedder, Architects, Syracuse, New York

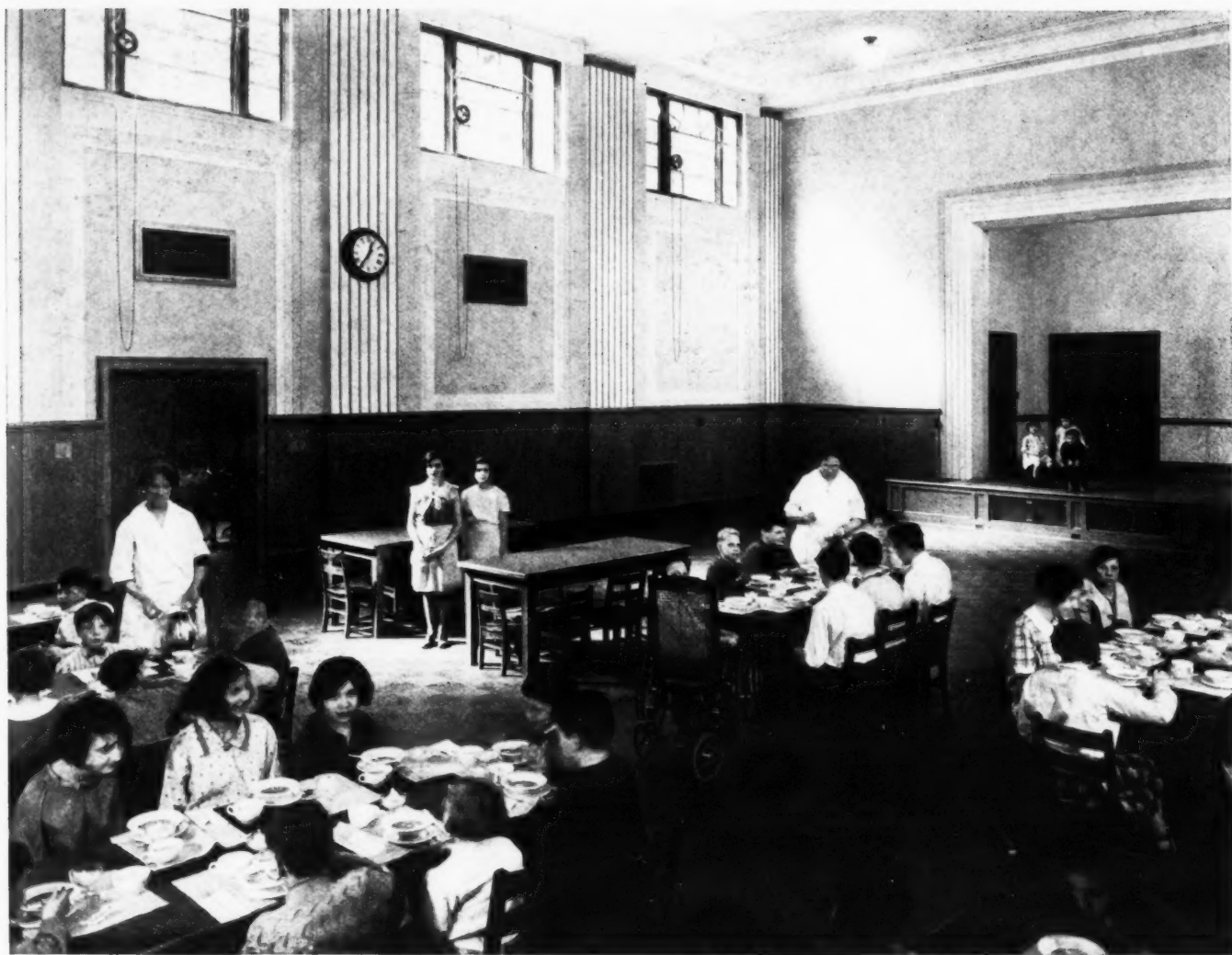


RESTROOM FOR CRIPPLED CHILDREN



KINDERGARTEN FOR CRIPPLED CHILDREN

PERCY M. HUGHES SCHOOL, SYRACUSE, NEW YORK
Randall and Vedder, Architects, Syracuse, New York



CRIPPLED CHILDREN AT LUNCH, PERCY M. HUGHES SCHOOL, SYRACUSE, NEW YORK
Randall and Vedder, Architects, Syracuse, New York

late Percy M. Hughes, who for years was superintendent of schools and was intensely interested in the educational welfare of crippled children. The building has been located on the brow of a hill, in the southern section of the city, where it enjoys all the advantages of pleasant, healthful surroundings and a fine view.

The building is so planned that it can be used, if desired, without any contact whatever between the school for normal children and the school for crippled children. On the other hand, the arrangement provides for single administrative control and permits access to all departments of the normal children's school by those

crippled children who can take advantage of the shops, the library, etc.

The grade-school unit, which is two stories high, contains 13 classrooms in addition to a kindergarten, a principal's office, a gymnasium-auditorium, a library, locker rooms, toilets, and restrooms. The auditorium, which measures 45 by 78 ft. 6 in., has a balcony equipped with a motion-picture booth and a stage which is ample for all school uses. The room is fitted with movable chairs, which are stored under the stage when the room is used for gymnasium or play purposes.

The section for crippled children, which is

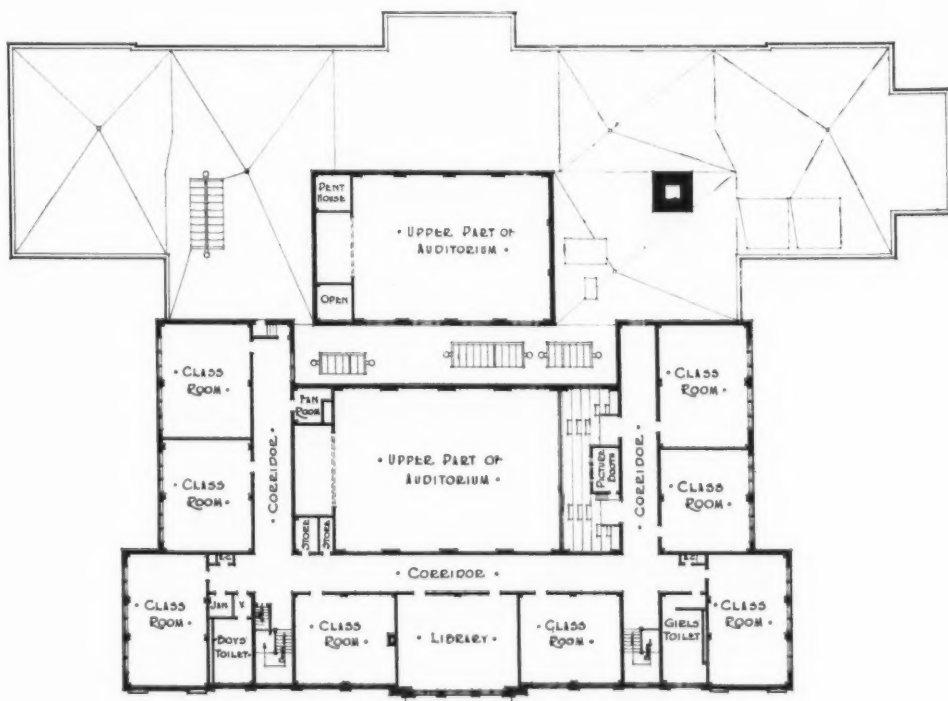
one story high, contains 4 classrooms, a sewing room, a medical clinic, a special exercise room, restrooms, several rooms for hydrotherapy, etc. An interesting feature is the combination dining room and auditorium, with its kitchen and its special facilities for play, motion pictures, and group activities. There are no stairways in this section of the building which the children must use. The one change in level from the corridor to the stage is arranged by means of a ramp.

Another feature is the bus room, which has space for two busses and is arranged for un-

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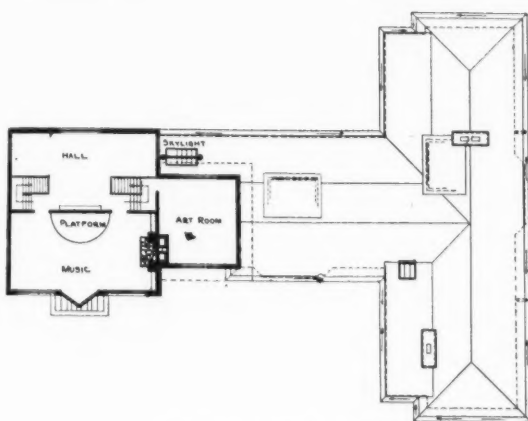
TAKING CRIPPLED CHILDREN HOME IN SPECIAL BUSES FROM SCHOOL



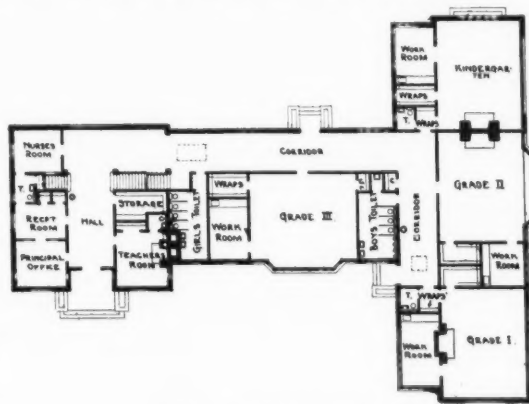
SECOND FLOOR PLAN
PERCY M. HUGHES SCHOOL, SYRACUSE, NEW YORK
Randall and Vedder, Architects, Syracuse, New York



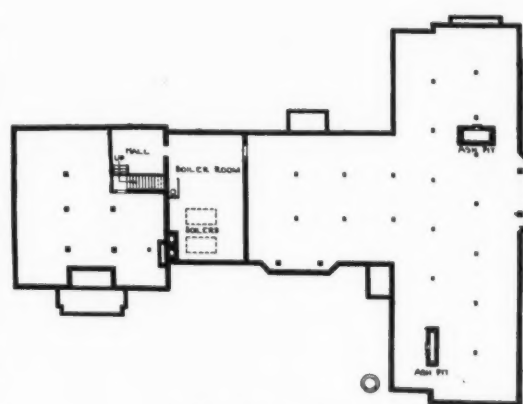
BRAESIDE SCHOOL, HIGHLAND PARK, ILLINOIS
John S. Van Bergen, Architect, Highland Park, Illinois



SECOND FLOOR PLAN



FIRST FLOOR PLAN
BRAESIDE SCHOOL, HIGHLAND PARK, ILLINOIS
John S. Van Bergen, Architect, Highland Park, Illinois



BASEMENT PLAN

THE BRAESIDE SCHOOL, HIGHLAND PARK

The new Braeside School, at Highland Park, Illinois, represents an interesting school development in an exclusive residential suburb in the wealthy North Shore district of Chicago. With its low horizontal lines, its rough stone walls and dark wood trim, and its setting of fine old oaks, the building is typical of the architecture and general atmosphere of the community. The school cares for 55 children in the kindergarten and primary grades and is located on a site of considerable size, which has been especially chosen because of the certain enlargement of the building. The building faces east and is the first unit of a building scheme, which will include an auditorium wing and an upper grade unit to be added to the south. The central section with its inviting main entrance, is a square, two-story building with a gently sloping and overhanging roof.

To the left of the entrance are the administrative offices and the nurses' room. To the right is a teachers' restroom and a large storage room. Stairways on either side of this corridor lead to the second floor, which has three rooms one of which will serve as a balcony when the auditorium is constructed. The other rooms are intended for library and group rooms in the ultimate school.

The north wing of the building has four classrooms, and provides a workroom for each

of the teachers. Three of the rooms have fireplaces which add considerably to the effect as well as their comfort. Each room also has cupboard space with individual compartments for each child. There are separate cloakrooms and teachers' closets.

The woodwork in the building is in gray-green and the furniture is finished to match. The walls are rough plastered, with ivory finish.

The architect of the building is Mr. J. S. Van Bergen, of Highland Park, who has designed the structure in harmony with the spirit, as well as the general tone of the community.

THE WASHINGTON SCHOOL, OLYMPIA, WASHINGTON

Olympia, the capital city of Washington with a population of 15,000, is an outstanding example of successfully rebuilding a public-school system, physically and pedagogically. This achievement is a monument not only to the superintendent's efficiency, but to the school board's progressive spirit and the community's liberality. The starting point of the improvement campaign was the final settlement, a few years ago, of the location of the Washington state capital. When it became definitely known that the site of the state government would remain permanently at Olympia, the residents of the capital felt justified in rebuilding, enlarging, and improving the public schools.

At the close of the world war, Olympia's

school buildings were obsolete and overcrowded. New and up-to-date structures were needed to shelter the greatly increased school population which was anticipated and to provide them with facilities for modern education. The city, however, already was bonded nearly to its legal limit. The financial problem, therefore, had to be solved first.

There was one thing for Olympia's taxpayers to do: pay off the old bonds as soon as possible, in order to make possible the borrowing of funds needed for new construction. In assuming new financial obligations, twenty-year bonds were issued, but the privilege of taking up all or any part of them at any half-year interest-paying period was reserved.

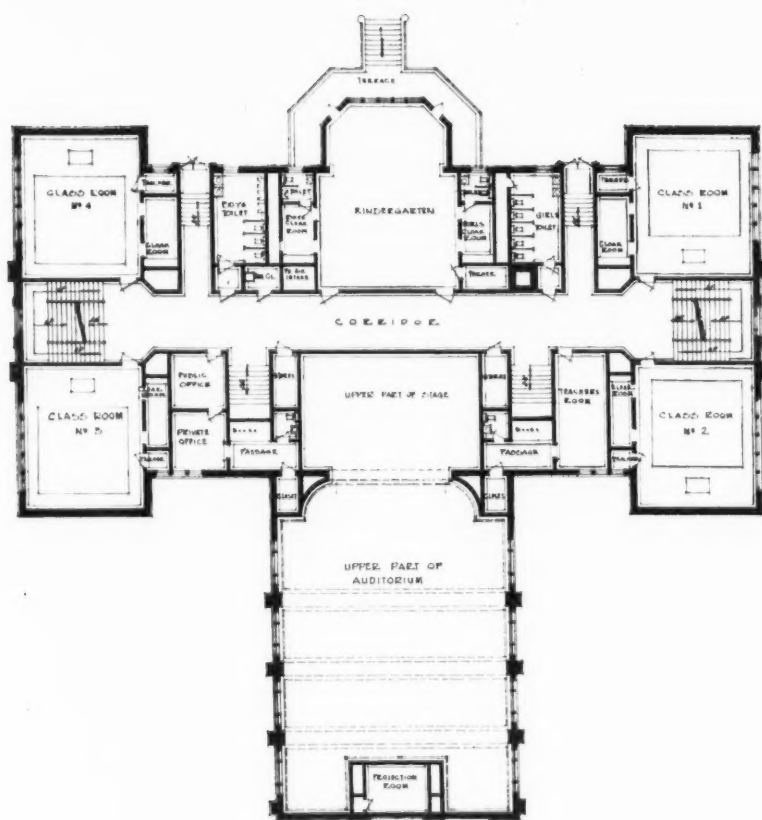
During the period 1923-28, a new grade school, the Lincoln School, was erected at a cost of \$123,000; a small grade building was erected to become the nucleus of a larger building, and a considerable addition was made to the high school. Finally, the Washington Grade School was built at a cost of \$135,000. In all, \$505,000 was spent for new buildings and grounds.

The Washington School

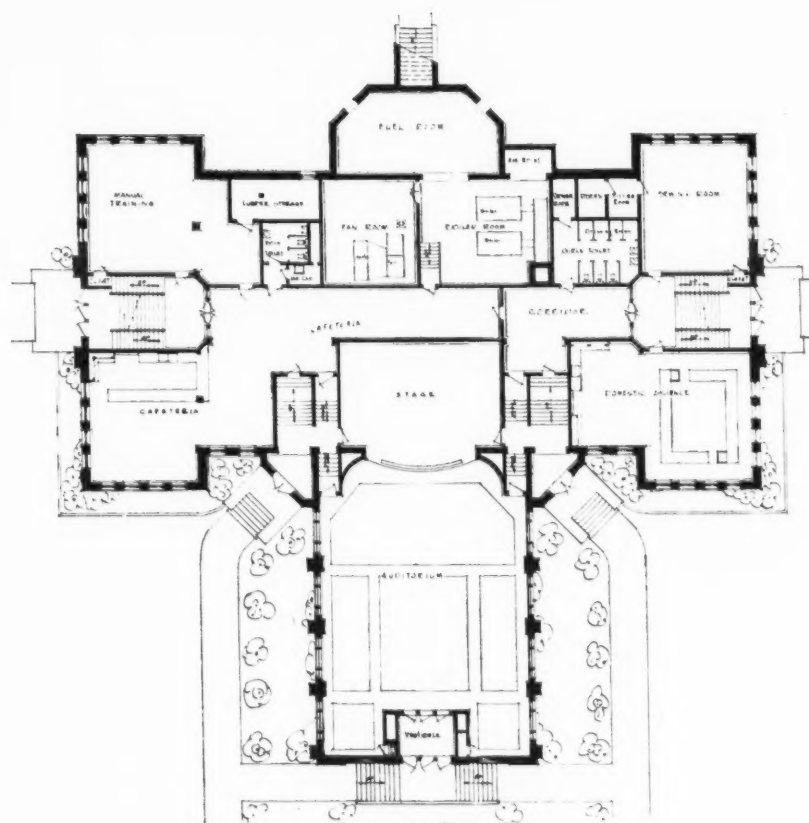
The new Washington School is located across the street from one of the old discarded school buildings, which was built 37 years ago. A comparison of the two buildings affords a striking contrast between the new and the old in school architecture. The general contract was let



WASHINGTON SCHOOL, OLYMPIA, WASHINGTON



-FIRST-FLOOR-PLAN-



-BASEMENT-FLOOR-PLAN-

WASHINGTON SCHOOL, OLYMPIA, WASHINGTON

for \$91,606; the plumbing, sewerage, heating and ventilation cost \$25,339; the electrical work cost \$3,639; the hardware cost \$2,062; the electrical fixtures cost \$1,000; the furniture and equipment, \$11,284. The total cost of the structure was \$135,000, or 22 cents per cubic foot. A Chehalis builder finished the job in eight months.

The building is three stories high and measures 145 by 75 ft., with an auditorium wing. The style is Italian renaissance. The brick walls are covered with ivory cement.

On the first, or ground floor, are the cafeteria, the manual training, and the home-economics

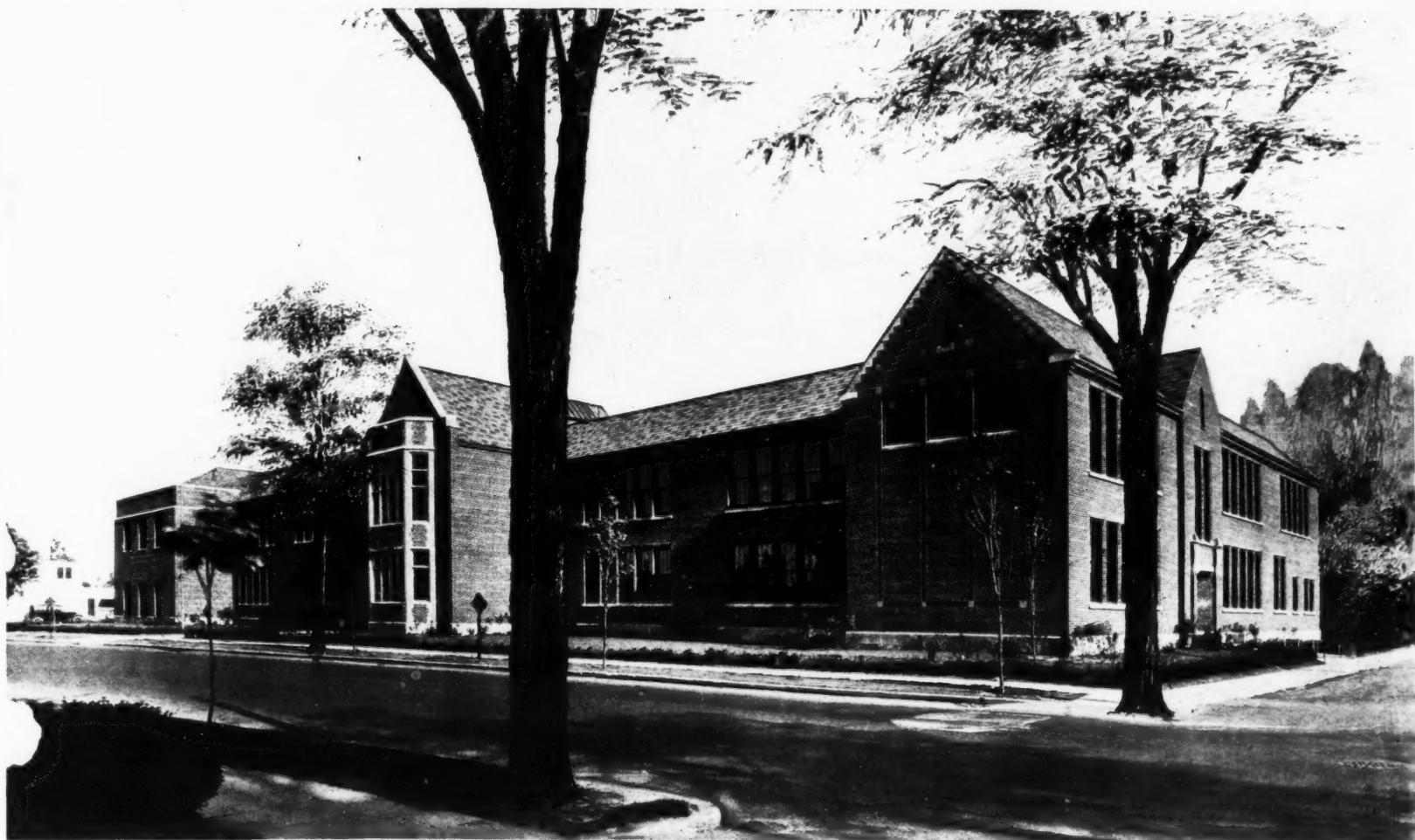
rooms. The main floor contains four classrooms, the kindergarten, the teachers' restroom, the principal's office, toilet and lavatory facilities. The third floor contains seven classrooms, a library, two small first-aid rooms, toilets, and lavatories. The auditorium seats 500, and the rear half of the floor slopes upward to give a better view of the stage.

Special care has been exercised in planning the kindergarten quarters. A large, square room on the east side of the building has been planned for the little ones and the outside wall has been curved outward in the form of a large bay window. On each side of the room there

are spacious lavatories, equipped with small-size toilets, while in one corner there is a supply cabinet.

The building is heated by means of a vacuum steam system, which is thermostatically controlled. The building has two low-pressure boilers, carrying one and one half to three pounds of steam when in operation. Only one boiler need be operated during an ordinary heating season. The fuel expense is exceptionally low, cheap slabs from near-by sawmills being burned. This wood costs less than \$3 per cord, delivered.

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THE BEIGER SCHOOL, MISHAWAKA, INDIANA
Hamilton, Fellows and Nedved, Architects, Chicago, Illinois

THE BEIGER SCHOOL, MISHAWAKA, INDIANA

The Beiger School at Mishawaka, Ind., is a combined elementary and junior high school, located on the Lincoln highway, in the east end of Mishawaka. The building, which is fireproof, is built of brick and stone, in the Tudor Gothic style.

The structure, which has a capacity of 700 pupils, contains a kindergarten, a library-study hall, a combined gymnasium-auditorium, a music room, a lunchroom, an office, and nineteen classrooms.

The first floor is planned entirely for the elementary school and has the administrative office as the center around which all the activities center.

The second floor contains several upper grade classrooms and a series of special rooms for the junior high school. The gymnasium-auditorium and the library are the two spots which constitute the centers of activity.

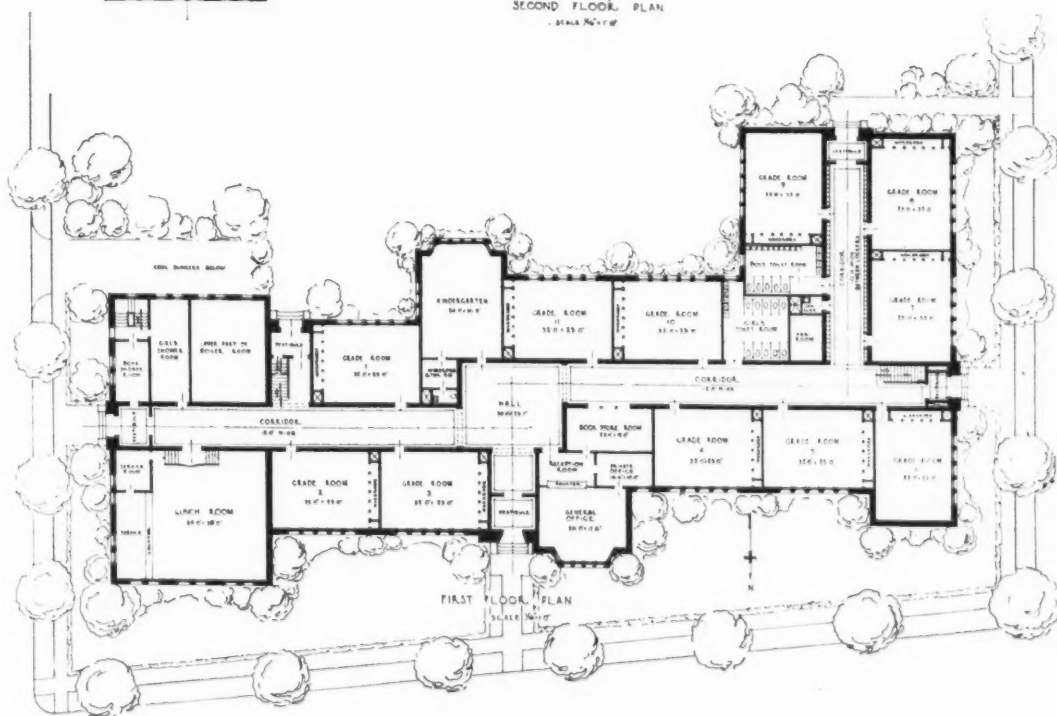
The contract for the building was awarded in January, 1928, and the building was completed and occupied in the following September. The building is 340 by 250 ft. in size. An auditorium-gymnasium 50 by 80 ft. in size, provides accommodations for 600 persons.

The corridors and stairs are finished in terrazzo; the classrooms are plastered and have maple floors, the gymnasium has brick walls and wood trusses and roof; the toilet rooms are finished in terrazzo, with metal partitions.

The building is heated by a split system, with automatic temperature control. The plumbing is a modern type.

The building contains 1,050 pupil stations and was erected at a cost of \$240,000 or 30 cents per cubic foot. The per pupil cost of the building was \$343.

The building was planned and erected under the supervision of Messrs. Hamilton, Fellows & Nedved, Chicago, Ill.



THE BEIGER SCHOOL, MISHAWAKA, INDIANA
Hamilton, Fellows and Nedved, Architects, Chicago, Illinois

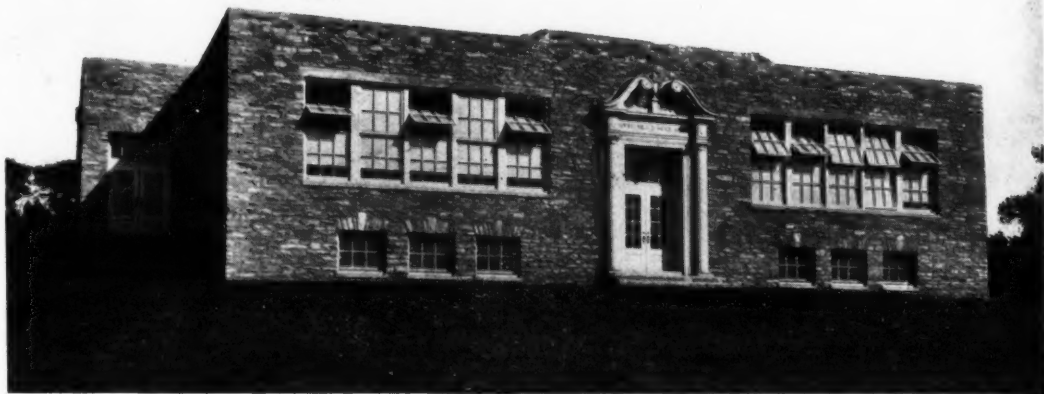
THE SPRING MILL SCHOOL

A Four-Room School Planned for Enlargement

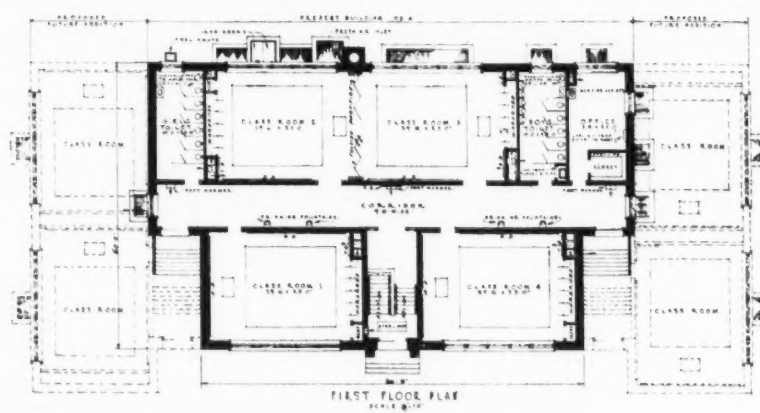
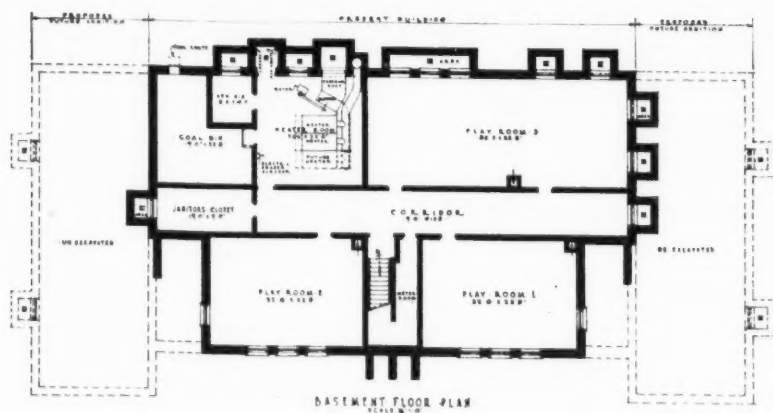
The so-called Spring Mill School Annex is a complete school unit, erected in the village of Spring Mill for the school district of Whitmarsh township, Montgomery county, Pa. In financing the construction, the school board departed from the usual procedure of bonding the district; the tax rate was increased for two years to cover the entire cost.

Although the school has a Georgian entrance, it is designed along modernistic lines. The original building, erected some 35 years ago, was so designed that it was not practicable to alter or add to it. Upon the architect's recommendation, the school board decided to construct a new building on an adjoining site, and to continue using the old building until such a time as it could be replaced.

The new building contains four classrooms, and is so arranged that four more rooms may be added in the future. The two rear classrooms are connected with a folding partition so that



THE SPRING MILL SCHOOL ANNEX, WHITEMARSH TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
Watson K. Phillips, Architect, Philadelphia, Pennsylvania



SPRING MILL SCHOOL ANNEX, WHITEMARSH TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA
Watson K. Phillips, Architect, Philadelphia, Pennsylvania

they may be thrown together for assembly purposes.

A local gray stone was used for the exterior walls and the interior bearing partitions are of slag concrete blocks. The main-entrance stairway is built of steel and concrete, and the walls are finished in glazed brick to a height of 5 ft. The interior is finished in yellow pine. The baseboards are coved where they adjoin the floors. Cement floors are provided in the toilet rooms, basement, and main-entrance lobby. Other floors are of rift yellow pine. Natural slate blackboards and cork bulletin and tack boards are provided in all classrooms. Windows

with reversible sash are provided in all the classrooms.

The equipment includes an ash hoist, fire-alarm system, and electric call-bell system.

The building was designed and erected under the supervision of Mr. Watson K. Phillips, Philadelphia, at a cost of about \$43,000.

FIFTY OUT OF 1,000 PUPILS FINISH COLLEGE COURSE

Mr. Frank M. Phillips, statistician of the U. S. Office of Education, has issued a report, in which he shows that of 1,000 students entering the common schools, approximately fifty, or 5 per cent, continue their education until they complete

a college course. Mr. Phillips estimates that 610 of the 1,000 students reach high school, but that they drop out after that at a rapid rate.

Making allowance for duplication, it is estimated that of an original 1,000 entering the public schools for the first time, 974 reach the sixth grade, 855 reach the seventh grade, and 768 reach the eighth grade. No data was available concerning the number of pupils who complete the work of the eighth grade.

Of the original 1,000, the number entering the first year of the high school is 610, while 438 reach the second year, 321 the third year, 268 the fourth year, and 260 are finally graduated from high school.



ROOSEVELT SENIOR HIGH SCHOOL, CHICAGO, ILLINOIS

Better Health for the School Child

W. W. Bauer, M.D., Commissioner of Health, Racine, Wisconsin

The health record is a vital part of the scholastic record.

This principle, long accepted in the larger population centers, is gradually winning adherents in the smaller cities. In fact, several years ago the writer, in attempting to establish a means for developing a health record of school children, made inquiry as to the presence or absence of such record in some form in 86 cities, ranging in population from 40,000 to 70,000 which were the subject of a health survey by the American Child Health Association in 1923. At that time there were but eleven of these which did not provide some means for ascertaining, and incidentally for improving, the health status of their school children.

The demand for consideration of health, as well as scholastic achievement, in the record of a school child comes from health officials quite naturally, but no less does it come from educators, and even from the public. Evidence of this is noted in the fact that it is possible to proceed routinely and without a "by your leave" to examine children in the schools, only rarely receiving a request to omit this service in the case of a particular child. These instances are usually to be explained by a lack of understanding, or upon the ground of beliefs which exclude the conception of physical disease. These objections must be respected, but the first can almost always be overcome, and sometimes the latter can, by the tactful offer of information.

Health Responsibility of Schools

The question has been raised whether the schools actually have any responsibility for the health of their children. This has been answered in the affirmative by educators themselves, too numerous to mention, and by the National Education Association itself in its joint committee with the American Medical Association. It is pointed out with perfect justice that any system which takes children out of the hands of their parents with, or without, the consent of the latter, has an obligation to return these children in no worse condition than it found them. But, the educators quite properly go even farther. Not only is there this obligation to be met, but there is something greater; there is opportunity to render an invaluable service to the children, and through them to their parents.

So thoroughly accepted is the doctrine that without health there cannot be the best expression of educational progress, that further comment need not be made here, and we may proceed directly to the discussion of how the health of the school child may be promoted, giving attention to the positive objective of health improvement, rather than the merely negative conception of disease prevention. We leave to the educator the solution of the problem of health instruction, which falls within his province, not ours.

The writer who has previously expressed his conviction that school-health programs are best carried out by health departments, rather than by school systems, will not enlarge on this topic here except to reiterate the principal reasons for such belief, to wit: Health departments can serve both public and private (including denominational) schools with one organization; health departments are legally charged with contagious-disease control in any event; and health departments can integrate schoolwork with their general programs to the advantage of all.

Proceeding now to the method by which the health of the school child may be promoted, we propose to outline a plan, which quite obviously is not the only way to meet this challenge, but



THE SCHOOL EXAMINING TEAM AT WORK
The typical health examining team of the Racine schools includes the school physician, a school dentist, and two nurses. This team examines the children without haste and with much care and makes a complete record of the findings.

which has been found successful, and can be applied at reasonable cost to almost any community, certainly to any city under 100,000 in population. It is the plan now in operation in the city where the writer is engaged in public-health work.

The city has a population of 80,000, according to the official government estimate. The school system consists of elementary, junior high, and senior high schools. The elementary-school enrollment is roughly 11,500. The health program is carried on in the elementary schools only, though ultimately it is hoped to extend the service in a modified form to include the other units as well. Given opportunity to serve only a fraction of the system, the choice of the elementary schools recommended itself as the proper one, since the prevention of ill-health in the very young is easier and cheaper than corrections in the older groups. Moreover, work in these early years is reflected in the later years. Public and parochial schools are given identical service with the same organization.

The School Physician

When a school examining physician was first proposed, the request was denied. There was no popular demand for it. It was repeated a year later; so was the denial. The array of logical reasons why it ought to be granted failed to convince the appropriating authorities in spite of the fact, be it noted, that these gentlemen were liberally disposed toward public health projects. Did we not have nurses in the schools? There are many who seem to think that nurses are capable of making physical examinations of school children. True, these are usually called "inspections," an odious term, as if our children were so many head of cattle to be "inspected!" Of course a nurse, or any other adult person who is not feeble-minded, can determine the relationship of a child's weight to the normal, or see that breathing through the nose is impossible, or detect vision failures of gross degree. But, a nurse is not qualified to make a real physical examination, and it is unfair to the nurse, the children, the parents, and the school

system to require her to go through the motions of doing so. Small wonder that the public does not realize this, when the writer had a demand within the past twelve months from a professional worker who should have known better, for a nurse to accompany and make physical examinations. The request was denied on the ground that compliance would mean a lowering of the service standards which we had fought hard to attain, though the nurse was assigned as requested to render all assistance possible within her proper sphere. No one can have a greater regard for the public-health nurse than the writer, and it is as much in her defense as in that of the principles involved, that protest is made against asking of her such things for which she is not prepared and which she does not wish to do, knowing as she does that they violate the ethics of her profession.

When argument and persuasion fails, there remains the resource of demonstration. "Demonstration" has become a magic word in the field of social service. It calls forth the vision of great endowments with bursting coffers and the urge to do something for "backward" communities. These have their place, but we did not employ them in our community. Nor, did we beg the local medical profession for free service. We laid the matter directly before the court of last resort, the people, through the medium of the annual sale of penny tuberculosis Christmas seals. School health work is an authorized anti-tuberculosis project, for good and sufficient reason. Our people furnished the sinews of war for our own demonstration, which was duly carried out. The results were charted, and presented as tangible evidence in support of the third request for a school examining physician. The request was granted.

The School Examining Team

There had been a school dentist for a number of years, working alone. There were nurses in the schools. Given the school physician, it was a simple matter to organize an examining team, consisting of the dentist, the doctor, and two nurses. This team, be it noted, had nothing

whatever to do with the routine school-nursing service, which makes examinations for suspicion of contagious disease, vermin and filth, follows up three-day absentees, and in general keeps watch of the health conditions in the schools. This team examines school children. It examines them without haste, and with much care. The regular course of such an examination will be followed a little later; first we must consider the physical equipment with which the team works.

The doctor is furnished with a stethoscope and an electrically lighted oto-laryngoscope for the diagnosis of nose, throat, and ear conditions. A portable scale is carried to schools which have none of their own. There is an eye chart with standardized illumination, according to the design developed by the National Society for the Prevention of Blindness. The dentist has a portable chair with instrument tray attached, an electric dental engine, a cuspidor of the portable fountain type with reservoir and flushing bowl, an electric sterilizer, and eighteen sets of explorers, mouth mirrors, and cleaning brushes. The cuspidor bowl, being of porcelain and subject to frequent breakage in moving, was soon replaced with one of spun copper, chromium plated.

The team is scheduled to visit each school in the city (there are 29), once a year, and to stay there until its work in that school is finished. The children to be examined include the first grade, sixth grade, and children whom the principals, or teachers, may wish examined for special reasons. The examining hours are from 9:00 a.m. to 12:00 m. Mondays, Wednesdays and Fridays, plus a special additional hour once a week by appointment with the doctor only, when more intensive examinations may be made. In the time allowed, it has been found possible to examine four thousand children each year, a little more than one third of the elementary enrollment. The choice of children to be examined fell upon first-graders, because they are the entering groups (if we exclude the kindergartners, whose attendance is noncompulsory and irregular), sixth-graders because they are leaving to enter the junior high schools, and the special groups for reasons which are self-evident. It would, of course, be ideal to examine all children every year, but this plan is not being presented as an ideal. It is offered merely as an example of a method which can give good results in any community.

At first, parents were not invited to attend the examinations. They were welcomed if they came, but no effort was made to induce them to be present. Now they are invited, by means of a printed invitation, which allows them to select the day and hour which suits their convenience. When they designate the time, we see to it that the examination of that particular child takes place then. There are enough children whose parents do not announce their intention of coming to keep the team steadily employed between scheduled appointments. The presence of the parent slows up the examination to some extent, but it pays in other ways, which more than compensate for this slight disadvantage. We regard the presence of the parents as a powerful factor in securing corrections which are indicated by the examinations, and we believe further that this demonstration of what a physical examination means causes them to be more discriminating in the future choice of medical advisors, and may possibly convert them to the practice of annual physical examinations.

The Examining Procedure

Children to be examined are brought from the classroom by one of the nurses with the team. The first step is to start the record card, or if the child has been examined before, this is brought from the room, where it has been on file with the scholastic record. Each card pro-

Form 65-18M-1-30-W
RACINE HEALTH DEPARTMENT

Dear Parent,

Your child will be given a physical examination by the school doctor and dentist some Monday, Wednesday or Friday morning during the next two weeks.

You are invited to be there. If you are coming, please mark the day and time on the attached coupon, tear it off, and send it back with the child.

Yes, thank you—
I am coming to see my child examined:
Monday ☒ Wednesday ☐
Friday ☐

Date: Sept 8
Anna Smith
Sign here

Mark the day of the week you are coming, and write in the date.

W. W. Bauer
Commissioner of Health

The above notice is sent to parents in cases where children are to be examined both by the school doctor and the dentist. If possible, one of the parents is expected to be present.

vides for recording three examinations. Then weights and measures are taken, and the theoretical normal weight is recorded. Hearing tests are made by the whisper method at a distance of twenty feet, a test which is not scientific but practical, and we believe to be preferred to the watch test. Vision testing is done according to the method recommended by the National Society for the Prevention of Blindness, using the standardized-illumination chart which they have developed, and which renders the tester independent of the changing intensities of natural light. This done, the child is ready for the doctor. Nurses have done the work so far, which has taken about five minutes for each child. The nurses begin work twenty minutes before the doctor arrives, to be ready for him.

The doctor receives the child and the record of work just done by the nurses, which he reviews if he thinks desirable. He then examines the eyes and ears for disease conditions, and notes carefully the condition of the throat. The presence of adenoids is judged by the child's ability to breathe through the nose, as well as by the contour of the face. The presence or absence of goitre, or swollen glands in the neck is noted. When parents are present, permission to remove clothes for chest examination is easily secured, another advantage in their presence, since removal of clothes in the absence of parents, unless with their written consent, is unwise. Obviously, a chest examination through clothing can be expected to discover only the grossest of defects. The clothes removed, heart and lungs are examined. The nutrition is diagnosed by the condition of the skin, muscles, and tissues; without such observations mere weight records are meaningless as indicators of health. The skin itself is observed for eruptions. Ex-

Form 66 Rev. 10-1-30-W
BOARD OF HEALTH
PHYSICAL RECORD CARD

Name (surname first) _____
Address _____
School or Empl. _____
Address _____
School or Empl. _____
Address _____
School or Empl. _____

To be made for each pupil who has had either physical or dental examination and to be kept with the child's school records constantly.

Sex	Age	Grade	Date	Sex	Age	Grade	Date	Sex	Age	Grade	Date
Height	Weight	Normal Wt.	Hgt.	Wgt.	N. W.	Hgt.	Wgt.	N. W.	Hgt.	Wgt.	N. W.
Eyes	Ears	Throat	Eye	Ears	Throat	Eye	Ears	Throat	Eye	Ears	Throat
Teeth	Adenoids	Heart	Teeth	Adenoids	Heart	Teeth	Adenoids	Heart	Teeth	Adenoids	Heart
Stomach	Skull	Heart	Stomach	Skull	Heart	Stomach	Skull	Heart	Stomach	Skull	Heart
Abdomen	Posture	Nutrition	Abdomen	Posture	Nutrition	Abdomen	Posture	Nutrition	Abdomen	Posture	Nutrition
Defect	Def.	Def.	Defect	Def.	Def.	Defect	Def.	Def.	Defect	Def.	Def.
Vaccination	T. A.	Vacc.	Vaccination	T. A.	Vacc.	Vaccination	T. A.	Vacc.	Vaccination	T. A.	Vacc.

NOTE TO PHYSICIAN: In recording defective conditions, indicate by "X" those which are simply noted for record; by "D" those which may be expected to affect the health and should be eliminated; by "C" those apparently of serious or emergency character. Use numbers 1-4 to indicate "slight," "moderate," "severe," respectively.

NOTE TO NURSES: When defects are corrected or non-recurrent defects placed under treatment, place a "C" in red ink in same space where defect is recorded.

PHYSICAL RECORD CARD

To be made at same time as physical exam.

Date	Grade	Date	Grade	Date	Grade
PLANE	DECD	PLANE	DECD	PLANE	DECD
No. Defective Teeth		No. Defective Teeth		No. Defective Teeth	
No. Cavities		No. Cavities		No. Cavities	
No. Filled Teeth		No. Filled Teeth		No. Filled Teeth	
No. Extracted Teeth		No. Extracted Teeth		No. Extracted Teeth	
Malocclusion (1-2-3)		Malocclusion (1-2-3)		Malocclusion (1-2-3)	
Six Year Molars		Six Year Molars		Six Year Molars	
Mouth Hygiene (A-B-C)		Mouth Hygiene (A-B-C)		Mouth Hygiene (A-B-C)	
Cleaning (done or rec.)		Cleaning (done or rec.)		Cleaning (done or rec.)	

FRONT AND BACK OF THE PHYSICAL RECORD CARD FILLED IN AFTER EACH EXAMINATION OF CHILDREN

amination of the abdomen and extremities completes the doctor's part. While he is working, he talks with the parent, or the child, about health habits, and drops suggestions which the nurse afterward reinforces, or he answers questions. The examination loses its full significance if it is not regarded as an educational medium, as well as in the light of a service per se. The doctor takes about eight minutes for this work.

The dentist next examines the teeth. This is no superficial inspection. With explorer and mouth mirror he searches all the surfaces of the teeth, not merely those which appear to the eye when the mouth is opened. Defects are recorded. The children whose mouths need it most are given a cleaning. The time used here varies from three or four minutes for clean perfect mouths — which are rare enough — to ten minutes for those requiring cleaning. The average is roughly seven minutes.

The child has now spent twenty minutes in the hands of the examiners. It is usually possible to keep four children in process of examination at one time, thus making the rate for the team twelve children per hour, or roughly, 35 per session. This does not pile up impressive totals of work performed, but it produces examinations that mean something.

Having made the examination, the next question is what will be done with the information now available? To be effective, it must first become a part of the child's school record. We accomplish this by having our record cards printed in the same size and style as the school record, but in a different color. Most of the time the teachers keep them, as we request, with the scholastic record. Then we must reach the parents, especially those who did not come to attend the examination, by reason of inability, indifference, or even antagonism. Fortunately in the cooperation of our school system, we have arranged to send home with each child a folder, which reports the physical findings and contains other suggestions, such as health habits. This is accompanied by a letter on school stationery, signed by the school principal, calling attention to the physical report and urging consideration of it. A short time later, a nurse calls at the home, explains the report to parents who may not understand it, and again emphasizes the importance of doing something about it. If necessary, she assists in getting in touch with agencies who can help to secure reduced costs, or even free treatment where the case warrants. For the correction of dental defects in poor children, the dentist of the team conducts a free clinic every Saturday morning at the health department.

The cost of this service, on its present basis, is as follows:

School physician (10 hours weekly) . . .	\$1,500 per annum
School dentist (exclusive of clinic) . . .	1,200 per annum
Dental clinic	300 per annum
Time of nurses (salary of \$1,500) . . .	500 per annum
Records and supplies	150 per annum
Total operating cost (excluding clinic) . .	3,350 per annum
Cost per examination (excluding clinic)	0.837
Value of physical equipment	500

The results, in defects discovered and corrected, are shown in the table following. Obviously the indirect results cannot be measured, but they are by no means negligible. The figures are for 1929.

Defects	Found	Corrected
Baby teeth	2,665	1,091
Permanent teeth	1,714	
Vision	301	245
Hearing	59	63
Nose and throat	786	242
Heart	68	26
All others	1,207	129

At this point a word of caution is in order. It will not do to take the figures for defects found and corrections made, and compute percentages of success from them, except during the first year of the work. In every subsequent year, corrections will include some defects dis-

(Concluded on Page 122)

The Administration of Janitorial-Engineering Service - V

H. S. Ganders, University of Syracuse, Syracuse, N.Y.

C. E. Reeves, Elmira College, Elmira, N. Y.

(Continued from August)

Holidays and Vacations. Of the 90 sets of rules and regulations analyzed, 24 provide that janitor-engineers shall not be required to work on Saturday afternoons and 10 provide that they shall not be required to work on holidays. In 5 rules and regulations it is required that they shall have no time off on Saturday afternoons and holidays.

Summer Vacations

Provisions for summer vacation for janitor-engineers is made in 33 of the 90 sets of rules and regulations. In 25 of these the vacation period is specified as two weeks with pay, in two cases it is specified as ten days with pay, in three it is specified as one week with pay, and in two "as determined by the board of education."

In 44 sets of rules and regulations analyzed, janitors and other employees of the janitorial-engineering force may be assigned extra work by building principals, or by the superintendent of buildings and grounds. Employees should, of course, receive extra compensation for emergency work on holidays or Saturday afternoons or for work at the building in the evenings when buildings are in use.

In many rules and regulations provision is made for the organization of the janitorial-engineering force into repair gangs for summer work. This is common practice in school systems that the writers have observed. All janitor-engineers of a school system cannot be used in this way at any one time. Every building must have at least one janitor-engineer in charge at all times to take care of the yards and lawns and to do summer cleaning. The repair gangs go from one building to another, as assigned, under the general direction of the superintendent of buildings and grounds and under the immediate direction of the utility men who are specially trained as plumbers, carpenters, painters, etc.

Supervision of Work Gangs

By such a method considerable expense is saved for the district, and the entire force may be employed on a twelve-months' basis without payment for time when a part of the force may be idle. Such work as painting, remodeling of classroom furniture, repairing of walks, steps, fences, roofs, etc., and numerous other repair jobs are performed by these repair gangs. Adequate supervision of such work is essential, even if outside supervisors must be employed, and such gangs must not be required to do repairwork that requires such a degree of skill that they cannot properly perform it.

Provision for Substitute Service. Where utility men are employed in a school system, they may be used as substitutes when members of the janitorial-engineering force are absent because they are ill or because of death in their immediate families, or for any other cause that makes their absence necessary. Substitutes must also be provided in case of the resignation of a janitor-engineer until a successor can be appointed.

Where there are no utility men, or where they cannot be spared from their regular work for substitute service, a list of qualified substitutes, with street addresses and telephone numbers, should be kept in the office of the superintendent of buildings and grounds. In case of unexpected absences, the superintendent of buildings and grounds should be notified of the absence, early in the morning.

Whenever possible, he should be notified of necessary absences on the day before the absence occurs. He should then provide a substitute from his list of qualified substitutes.

The Janitor's Duties

For What Should Janitor-Engineers Be Responsible? School janitor-engineers should be held responsible for the efficient performance of all work that properly belongs to their positions. They must be held responsible for performing such work with greatest economy of time, energy, and cost to the school district. They must be held responsible for the performance of all duties with sufficient regularity and frequency and at the best possible time. They must be held responsible for securing good results, as judged by objective standards where possible, and by subjective standards in other cases. Under given conditions and with specified tools, materials, and agents, they must be able to perform each job in standard time per unit of work. For greatest efficiency and economy they must be able to take advantage of conditions that exist; use the best tools, materials, agents, etc., that are available for their work; and use the best methods of procedure.

School janitor-engineers should be held responsible for all cleaning work about the school buildings and on the grounds, for the proper performance of many special jobs, and for the proper operation and care of the mechanical equipment of the building. They should be held responsible for maintaining proper temperatures in various rooms and proper air conditions throughout the school buildings. They must be responsible for preventing misuse of buildings and grounds and for opening and closing buildings at proper times.

Among the cleaning jobs for which janitor-engineers should be held responsible are:

1. The daily cleaning of floors of classrooms, special rooms, corridors, and stairs.
2. The periodical cleaning and treatment of all floors.
3. The dusting of furniture, woodwork, fixtures, pictures, window shades, walls, ceilings, etc.

4. The periodical cleaning of woodwork and furniture.

5. The cleaning of window and other glass.

6. The cleaning of toilet-room floors, toilet bowls, seats, urinals, woodwork, etc.

7. The cleaning of blackboards.

8. The cleaning of erasers.

9. The cleaning of chalk trays.

10. The cleaning of cork boards.

11. The cleaning and polishing of metal fixtures.

12. The cleaning of drinking fountains, sinks, and lavatories.

13. The cleaning of inkwells.

14. The cleaning of such basement rooms as play courts, gymnasiums, locker rooms, etc.

15. The cleaning of office and restroom carpets, rugs, and curtains.

16. The cleaning of door mats and foot scrapers.

17. The cleaning of gymnasium mats.

18. The cleaning of swimming pools.

19. The cleaning of umbrella racks.

20. The cleaning of janitors' tools and appliances.

21. The cleaning of inside glazed bricks.

22. The cleaning of fan room, furnace room, and furnaces.

23. The cleaning of waste-paper baskets.

24. The removal of chewing gum, ink stains, and chalk and pencil marks from walls and furniture.

25. The removal and proper disposal of sawdust, shavings, filings, garbage, etc., from shops and domestic-science rooms.

26. The removal and proper disposal of waste paper.

27. The disinfection of toilets, hand rails, and door knobs.

In connection with the work of heating and ventilating, janitor-engineers should be held responsible for:

1. The proper frequency and time of firing furnaces.

2. The use of proper amounts of coal at each firing of furnaces.

3. Proper methods of firing and proper condition of the fire bed.

4. The proper removal of ashes both from the furnace and building.

5. The proper operation of thermostats.

6. The proper method and frequency of cleaning boiler tubes.

7. The proper care of all parts of the furnace.

8. The proper care of hot-water tanks.

(Continued on Page 138)



JANITORS RECEIVING INSTRUCTION IN THE CLEANING OF BLACKBOARDS

THE AMERICAN School Board Journal

EDITORS:



WM. GEO. BRUCE

WM. C. BRUCE

The Problem of Teacher Surplus and Unemployment

THE problem of unemployment, which has in recent years afflicted the countries of Europe in a manner so serious as to necessitate governmental relief, is asserting itself in this country as well. While labor unions, and in some instances employers, have concerned themselves with the problem, statesmanship has hardly begun to scrutinize the same. In the larger centers of population the subject of teacher unemployment, too, has come under consideration.

Those who have concerned themselves with the subject of the teacher surplus have, in the main, held that there is in reality no surplus of real teacher talent. That may be true. The fact remains that, if our information is anywhere near correct, the number of trained teachers without positions will easily reach the hundred thousand mark. And that does not mean that these teachers were employed and suddenly thrown out of employment, but it means that thousands of young women have prepared themselves for the profession of teaching and then found themselves without positions.

To hold that these young people fresh from the teachers' colleges and normal schools do not possess the talent to make excellent teachers is hardly to the point. It would be fairer to hold that many of them excel in teaching ability and ought to replace the superannuated and incompetent now on the payrolls.

The causes which have led to the enormous teacher surplus in the United States are obvious. The profession of teaching is at present an attractive one, both from the standpoint of remuneration and social prestige. During the recent world war teachers left their profession in large numbers to enter the channels of commerce and industry where a more lucrative income was offered. This caused a temporary teacher shortage which, however, was met with the counterbalance of an increased salary schedule.

Once raised, the salary schedule fortunately remains upon the higher level. The policy to which boards of education adhered in the matter of compensation for professional service was a distinct departure from the old-time supply and demand rule. The school authorities no longer bargained for teacher service upon a low tariff basis, but tried to approximate the value of that service and fix the compensation accordingly.

The problem has thus far found its more immediate solution in the fact that the professionally trained teacher unable to secure a position enters upon other occupations for a livelihood. The solution, however, must go deeper. It must begin at the beginning. The sources of the teacher supply must come under some form of regulation. At least adjustments, whereby the standards of admission to the profession come under closer scrutiny, must be found.

There is much in the claim that if all the incompetents now in the teacher service were weeded out, and were replaced by the competent now open for positions, the teacher surplus would disappear. But in the nature of things that is not easily accomplished. There can be no doubt, however, that if any good is to come out of the teacher surplus it must be in the direction of higher professional standards.

The regulatory discrimination must begin with the teacher training agencies and must be exerted by those who ultimately select and employ the teacher service. The sifting process must be carried to the point where it will give preference to the highly efficient and courageously eliminate the inefficient.

In viewing the situation in its general aspects it must also be assumed that the teacher surplus, at least in its present acute form, is transitory

only. Those about to choose a career are inclined to shun a highly overcrowded profession, and move along lines of least resistance. Thus the supply and demand phase in any calling finds in part at least its own adjustment.

It remains to be seen to what extent the school authorities throughout the land will become more exacting in choosing and retaining the teacher personnel with a view of maintaining high standards of service.

Appreciation for American School Architecture

THE evolution of the modern school structure, as exemplified in thousands of communities throughout the length and breadth of the country, is accepted in a matter-of-fact way. There has been progress in all lines of human activity, why not in school architecture?

The extent of this progress as applied to the modern schoolhouse of this country can only be measured in light of the progress made in other countries. Europe, since the close of the world war, has had little need for new school buildings, and wherever new structures have been engaged in they have been meagre in scope and utility. None of the other countries have excelled in the matter of schoolhousing.

The recognition to which the school architecture of this country is entitled is gradually entering the minds of those who are in a position to pass judgment. "America stands supreme today in the plan and design of her school buildings. Even the more modest achievements attained here are not dreamed of in European school architecture." So said a Pennsylvania school official recently.

This statement is not only true, but constitutes a well-deserved tribute to that American genius which has found expression in the conception and realization of the modern school structure. That genius has not only devised plans which, in point of orientation and construction, embody the best thought in the realm of school architecture, but has gone the limit in point of equipment. Here the offerings of science and invention are brought to the service of the school and its administration.

Thus the modern school structure, as exemplified in the United States, embodies not only the talents of the architect, but those of the engineer as well. In the matter of appointments, and the installation of serviceable utilities, the school administrator too, has demonstrated a progressive spirit. Thus, the American schoolhouse is a distinctive achievement in the field of architecture.

There was a time when the school and its activities were fitted into a building. Today the building and its paraphernalia are adjusted to the operations of the school. Instead of accepting a set of dress-pattern floor plans and a perspective design at the hands of an architect, the latter is asked to translate the educational needs of the school into a utilitarian structure. Thus the building is made to fit to the school, and not the school to the building.

The modern school structure has become the pride of every progressive community. That pride is well justified, not only because it rivals all other local expressions in architectural achievement, but also because it excels all similar structures found elsewhere in the world.

The Tenure of School Superintendencies

A QUARTER of a century ago the average tenure of the school superintendent was something like three years. Today that tenure runs considerably beyond that period. The position is attended with greater permanency, better compensation, and a higher appreciation of educational expert service.

In discussing the average official career of the superintendent in any one community it must be remembered that the changes which bring the tenure to a startling figure, occur with greater frequency in the smaller communities. The migration of educators from the smaller to the larger communities includes superintendents and principals as well as the rank and file of the teaching profession.

A larger community has its attractions in point of a widened service as well as a better compensation. Or put the other way, the smaller community with its social intimacies and peculiarities, has its drawbacks. Those identified with the schools are singularly subject to scrutiny and appraisal.

The ambitious school superintendent is on the alert for a better field of service and chances for better compensation. That is in keeping with the American spirit. There is an economic side to every profession, and

the schoolmaster like everyone else is entitled to the fruits of his labor. If he possesses the vision, energy, and leadership for a bigger job, he is justified in aspiring to the same.

In casting about one finds that the school superintendencies, as applied to the larger and medium size cities have been attended with greater security and finer prestige than ever before. While there are cities where there has been a regular come and go of school executives, there is a gratifying number of American cities where the superintendent has enjoyed a long and successful career.

While the credit primarily must go to the superintendent, who through his efficiency as an educational leader, has won the confidence and coöperation of the community, it must also be said the modern board of education is an important factor in superintendency tenure.

It requires a high-minded, unselfish, and efficient body to select a school executive, grant him a reasonable range of authority, and accord him to the needed coöperation and encouragement in order to carry the school system along successful lines.

Thus much depends upon the administrative body in knowing what a school superintendency really means, how to find the right man, and to place a proper estimate upon his services.

Choosing Board-of-Education Members

THE standards which are set up in the choice of members of the several boards of education throughout the land, vary mainly in the degree with which the community holds to definite ideals on popular education. The citizen who is concerned in the success of the schools is also concerned in the character and efficiency of those who are placed in charge of them.

Occasionally an editor comes forward and tells his constituency some wholesome things upon which to base the choice of school-board candidates. Thus, we hear the voice of an Illinois editor who says: "The board of education has a mean, hard job, administering the schools of this community. Its work is arduous and brings it into conflict with many opposing interests. A board of education that does its job well and honestly is bound to harvest a good crop of enemies."

What applies to one community applies to many others. The board member who consistently clings to the policy of serving solely the mental, moral, and physical welfare of the child is bound to get into conflict with somebody. There are those in every community who seek to profit at the expense of the schools.

But an editor who has some appreciation of the character of service a board-of education member is called upon to render, also has some notion of the kind of citizens that should be chosen for that service. Our Illinois editor says:

"The fitness of candidates for board of education honors ought to be subjected to public scrutiny. This scrutiny ought to be of an intelligent and high-minded sort. It ought to question the general fitness of the man, based upon his own education and talent. No one ought to be elected to the board of education upon petty issues. There are always plenty of squabbles on both sides of such issues. The position of the board of education is too serious, too difficult, to seek the candidates on such illusory grounds."

All this may seem elementary and simple. But those who have observed school elections at a close range know that petty likes and dislikes, minor issues in fact, frequently determine the choice of a candidate. On the other hand, the citizen who aspires to school-board honors must have no personal axes to grind. There is one great objective to which all agencies must be adjusted, all ambitions must be directed, all efforts must lead to. That objective is at once clear and unmistakable.

"The board of education, for its part," says the editor finally, "should remember that the public has a legitimate and reasonable interest in its doings and deliberations. It should satisfy the curiosity of the people when this is expedient. It should carefully avoid the appearance of mystery or of irritability when inquiries are made."

Safety of School Children and Traffic Dangers

THE question of the safety of children in traveling between their homes and the schoolhouse is becoming a matter of increasing concern. The school authorities in the larger centers of population have

taken definite steps in guarding the school children against the traffic dangers of the day. This has been in response to the many calamities and fatalities which have brought the problem directly to the doors of the school administrator.

The general impression that children are injured only as the result of reckless automobile driving has given way to a better knowledge of the subject. Street accidents, whereby children are injured, are as frequently due to the thoughtlessness of the child pedestrian as they are due to reckless driving. There are children that must be directed. They must be taught how to avoid danger.

The movement in the direction of safety as fostered by school authorities has in many communities assumed definite form. The automobile driver is cautioned by signs placed in the vicinity of the schoolhouse to note the school zone and to indicate to him that he must drive slowly. The coöperation of the police is sought in patrolling the crossings near school buildings during the period when children come or leave the school. Boy students have been trained to serve as traffic squads in the vicinity of the school immediately before and after school hours.

The several safety plans which have been inaugurated have in the main proved successful. Reports from the large cities go to show that the fatalities have been considerably reduced during the past few years. Some cities report that not a single child was injured in the vicinity of school structures within the past two years.

The assumption may be that the necessary caution is given by the parents. This may or may not be the case. The school authorities are, in the interest of their charge, bound to operate against the increasing traffic dangers of the day, and to protect the school child against such dangers as far as that may lie within their authority.

School Administration and College Degrees

THE college degree has become a factor in the professional workers service of popular education. Those in administrative control of the public schools, in filling the more important positions, have in recent years manifested an increasing recognition of the honorary academic degrees which are conferred by the higher institutions of learning. These degrees are well earned. A Ph.D. is granted on the basis of three or more years of graduate study accompanied by some original research in the field in which he has been working. These degrees add materially to the prestige of the instructor and are most helpful in securing executive positions.

While the higher institutions of learning grant degrees to those who have successfully completed a course of instruction, they also extend recognition for distinguished service outside of such institutions. Men who have achieved marked success in given vocations in life are honored at commencement time with college degrees.

These distinctions recognize worthy achievement in the field of statesmanship, commerce, finance, and the fine arts. They have not been extended to those who have as laymen rendered a marked service in the field of popular education. And yet there are men and women who have served the common schools loyally and efficiently for a half century, or more, have unquestionably made a contribution to the cause of education. Many of them have distinctive achievements to their credit.

When honors are conferred upon those who have made a name for themselves in a highly laudable pursuit, there is reason to believe that such honors are well deserved. In the light of true service it also follows, that some of the finest heroes and benefactors in American life may be found among the unknown workers who train the masses for useful citizenship. We sometimes wonder whether college authorities could not find candidates in the commoner walks of professional service, discover here and there a real hero in the common-school field, worthy of the finest distinction which a higher institution of learning can confer.

Our national character now needs to catch up with our national wealth.—Roger Babson.

The teacher should be particularly cautioned against partiality; there should be no favoritism; these things are not merely bad in themselves; they destroy the whole moral influence of the teacher.

—G. B. Emerson.

Bond-Interest Rates Continue Downward¹

Harold F. Clark, Ph. D., New York City

The downward trend of school-bond interest rates continued during the month of July. The net interest rate on all school bonds sold during the month was 4.42 per cent, which compares with a rate of 4.47 per cent for the month of June. School-bond interest rates are now substantially lower than they have been for well over a year. Although the trend of interest rates has been down for the past year, the movement does not seem to be over.

A little over two years ago school bonds touched a low point of 4.13 per cent net interest rate. Until this point has been reached during

ceding month. This reduction applied to all municipal bonds as well as to school bonds. During the last of July average municipal bond sales dropped to less than \$15,000,000 per week, as compared with an average for the year of substantially over \$30,000,000 per week. Total securities issued so far this year are substantially less than a year ago, which should make for better bond prices.

Table IV shows that the average yield of long-term Federal Government bonds has not stopped its downward trend. In September, 1929, the average yield on long-term Federal

has been in recent years, an actual scarcity of federal bonds may appear. This, of course, would tend to keep an artificial price on such bonds. However, for some time such bonds are

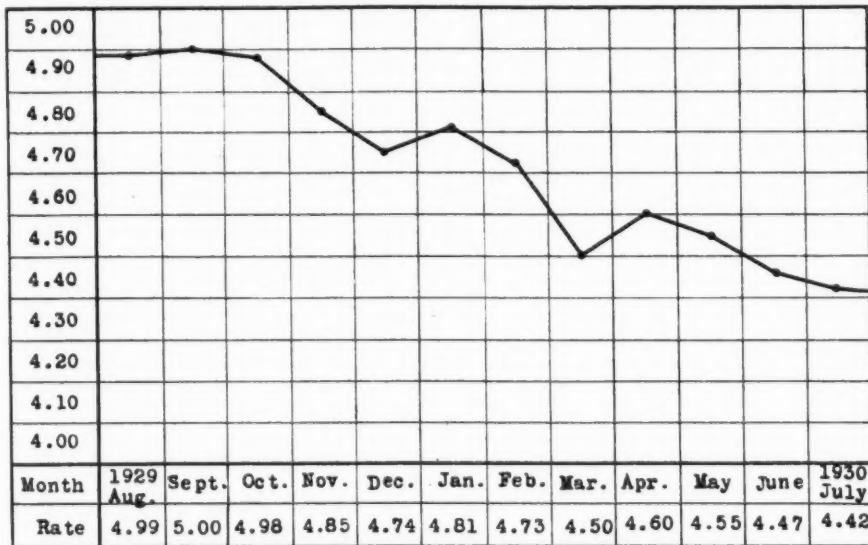


TABLE I. AVERAGE YIELD OF ALL SCHOOL BONDS SOLD DURING THE MONTH

the present year, we would not call school bonds really low. If money remains as cheap as it was during July and August, there is every reason to think that the interest rate on school bonds will soon approach this low point of two years ago. Time and again during July and August call money touched 2 per cent in New York, and on several days was available at even a lower figure.

School districts continue to borrow money for short periods, at rates of between 2 and 3 per cent. Long-term municipal bonds are beginning to be sold at substantially less than 4 per cent. Over any long period of time the school bonds would have to sell for less than 4 per cent before we would consider them really low. The school board that is really careful can do this at the present time. One of the financial

Government bonds was 3.70 per cent, while in August, 1930, the yield was down to 3.35 per cent, with every prospect of moving still lower. As more and more of the bonds of the National Government are retired, such bonds may be less and less valuable as indicators of the price of other bonds. There are certain financial houses that must have federal bonds for special purposes. If the war debt is reduced as fast as it

TABLE III. Bond Sales and Rates¹

Year	School	Municipal	Private	Year	Municipal
1929	230*	1,432*	10,194*	1929	4.67*
1928	218	1,414	8,050	1928	4.45
1927	266	1,509	7,776	1927	4.49
1926	260	1,365	6,344	1926	4.61
1925	323	1,399	6,223	1925	4.58
1924	288	1,398	5,593	1924	4.26
1923	206	1,063	4,303	1923	4.76
1922	237	1,101	4,313	1922	4.81
1921	215	1,208	3,576	1921	5.18
1920	130	683	3,634	1920	5.12
1919	103	691	3,588	1919	5.04
1918	41	296	14,368	1918	4.90
1917	60	451	9,984	1917	4.58
1916	70	457	5,032	1916	4.18
1915	81	498	5,275	1915	4.58
1914	42	320	2,400	1914	4.38

¹By special permission based upon sales reported by the Commercial and Financial Chronicle.

*Not final.

TABLE IV. Average Yield of Long Term Federal Government Bonds¹

Month	Rate	Year	Rate %
1930 Aug.	3.35*	1928	3.437
July	3.36*	1927	3.464
June	3.37	1926	3.544
May	3.41	1925	3.797
April	3.46	1924	4.010
March	3.40	1923	4.298
Feb.	3.50	1922	4.301
Jan.	3.51		
1929 Dec.	3.46		
Nov.	3.45		
Oct.	3.67		
Sept.	3.70		

¹Taken from Federal Reserve Bulletin.

*Not final.

Date	Average Price of 406 Stock (1926 Average = 100)	Average Price of 60 Bonds	Average Yield on 60 High-Grade Bonds
1930 Aug.	148.9*	98.4*	4.48*
July	149.3*	98.7*	4.49*
June	152.8	98.2	4.53
May	170.5	97.9	4.54
April	181.0	97.9	4.54
March	172.4	97.8	4.55
Feb.	166.5	96.4	4.65
Jan.	156.3	96.5	4.64
1929 Dec.	153.8	96.5	4.64
Nov.	151.1	95.7	4.70
Oct.	201.7	95.1	4.73
Sept.	225.2	94.8	4.76

¹As reported by Standard Statistics Company, Inc. Used by special permission.

*Not final.

likely to be a good indicator of the price of bonds in general.

Table V shows the decided trend toward lower prices of stocks. From a high point of 225.2 in September, 1929, the average price of stocks fell to an average low of 151.1 in November. There was a gradual increase to a high point of 181.0 in April. Since that time, there has been a steady decrease, with the monthly average for July below the average for November. As long as stocks are declining there is not likely to be much borrowed money going into

TABLE VI. Revised Index Number of Wholesale Prices (United States Bureau of Labor Statistics. 1926=100)

Month	All commodities	Building Materials	Year	All commodities	Building Materials
Aug.	86.1*	89.7*	1928	97.7	93.7
July	85.7*	89.8*	1927	95.4	93.3
June	86.8	90.0	1926	100.0	100.0
May	89.1	92.9	1925	103.5	101.7
April	90.7	94.7	1924	98.1	102.3
March	90.8	95.4	1923	100.6	108.7
Feb.	92.1	95.7			
Jan.	93.4	96.2			
1929 Dec.	94.2	96.2			
Nov.	94.4	96.0			
Oct.	96.3	97.8			
Sept.	97.5	97.5			

*Not final.

the stock market. This situation favors higher prices for bonds. Higher prices, of course, mean lower interest rates which is of interest to school boards. Table V shows along with the fluctuations of stock prices, the fact that bond prices have risen almost steadily for an entire year. As a result the yield on bonds has fallen very decidedly during the same period.

Table VI shows the sensational changes that have occurred in the prices of commodities during the past year. In September, 1929, the average level of all commodities was 97.5, based upon 1926 as 100. The final figures of the Bureau of Labor Statistics for June, 1930, show that this has decreased more than 10 points to 86.8, with a further decrease since that time. This is one of the striking factors of the current economic period and schoolmen take full advantage of it. The price of building materials decreased almost as much, showing a drop from 97.5 in September last, to well under 90 at the present time. If school boards are not getting the benefit of these drastic reductions in prices, they should investigate the matter carefully.

♦ The school board of Girard, Kansas, has re-organized for the year 1930, with the election of Mr. R. L. KIRKPATRICK as president, and Mr. J. D. BARKER as vice-president. Mr. Kirkpatrick succeeds R. L. Sullivan, who retired after completing six years of service on the board.

TABLE II. Amount and Yield of Bond Issues	
1. School bonds sold during the month ¹ of July..	\$ 15,160,000
2. All municipal securities sold during the year (to date).....	842,000,000
3. All school bonds outstanding (estimated).....	3,273,000,000
4. Average yield of all school bonds outstanding (estimated)	4.65%
5. Yield of school bonds of ten large cities.....	4.32%
6. Yield of United States long term bonds.....	3.21%

¹The monthly total of school bonds does not include all the bonds issued in the month, due to the difficulty of obtaining the yield on some of the issues.

papers in New York stated that the supply of high-grade bonds was less than at any time for many months, which applied to the situation during the first half of August. This paper went on to say that, unless there was an increase in the supply of bonds offered, the price of such bonds would advance, which would mean lower interest rates. The overwhelming weight of financial opinion at the present time is that bonds will sell at substantially lower interest rates than at present.

Total school bonds sold during the month of July were decidedly less than during the pre-

¹Copyright by Harold F. Clerk.

Let the 1950 school board
do the next thinking about the roof . . .



Photo by Curtiss-Wright Flying Service

The new Tilden High School at Brooklyn, N. Y. is protected by a J-M Roof
Approved Roofer—J. J. Fisher, Brooklyn

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Johns-Manville
Twenty-year
Bonded Roof

NO school board need spend its time in worrying about roof maintenance details. The simplest, safest solution of the roofing problem, either for a new building or an old one, is to have your local J-M Approved Roofer put on a Johns-Manville Twenty-year Bonded Roof. Such a roof is guaranteed by Johns-Manville and by the National Surety Company for twenty years.

There are more than twenty types of Johns-Manville roofs. From this line you can choose a roof suitable for every variety of building, while the period covered by the bond may be twenty, fifteen or ten years in accordance with the service desired and the size of your appropriation.

J-M Built-up Roofs are applied only by expert roofers. The work of application of each bonded roof is scrutinized carefully by a Johns-Manville Inspector. Afterwards a J-M Inspector examines the roof at intervals. In other words, a J-M

Roof is backed by more than the bond we give you. It is backed by painstaking care in every move from the manufacture of the materials, through their application and on into the succeeding years. And this care is taken by one of the nation's leading manufacturers of roofing materials.

We welcome opportunities to advise school boards, and their architects, on their roof problems. We will recommend from more than twenty distinct types the roof best suited for your school.

You owe it to your buildings to see that they are protected.

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Frequent window cleaning demands that the work be easy—yes, and inexpensive, too. Williams Reversible Equipment assures that. It permits all washing to be done from the inside! Which means a better

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Clean Your Windows from the Inside

An Outline of Teachers' Routine Duties

This comprehensive outline of routine duties of teachers has been prepared by Mr. H. C. Wegner, superintendent of schools at Waupun, Wis. It answers practically all questions which teachers can ask about minor school practices and precedents, and saves much time for teachers, superintendent, and principals. A bulletin like the present, prepared and delivered to all teachers on the opening day in September, has the force of formal printed rules, but may be modified from time to time.

General Routine Duties of Teachers TEACHERS ARE EXPECTED:

1. *Time in School.* To be in their rooms at least one-half hour before the beginning of classes, and to remain at least one-half hour after the close of their last class in the day to assist retarded pupils who may come for help.

It is advisable for teachers to be in their rooms when pupils begin to enter. They should not encourage or tolerate loafing in classrooms by pupils. The classroom should be thought of as a work laboratory, the teacher guiding the activities of pupils.

Teachers should not dismiss pupils before the regular time or leave the building during school hours without permission of the superintendent or principal, excepting in cases of sickness or accident which will not permit delay, in which case same should be reported to the office.

2. *Records and Reports.* To keep such records and reports as may be required by the superintendent or principal and to be prompt in the rendering of same.

3. *Teachers' Meetings.* To attend all teachers' meetings and be prompt in such attendance unless excused by the superintendent.

4. *Grievances.* To tell their professional grievances, if they have any, to the superintendent rather than to others. (Try him and see what he can do for you.)

5. *Suggestions.* To feel free to offer suggestions to the superintendent concerning their work and that of the school. The superintendent will welcome suggestions. He wants them.

6. *Dismissal of Pupils.* (a) To send home any child who is suspected of having a contagious disease or in whose home such disease is thought to exist. (Give the school the benefit of the doubt.)

(b) To prohibit any pupil from remaining in school when he appears ill, without a doctor's permit.

(c) To send home any pupil whenever his presence because of vermin, filth, etc., is obnoxious.

Note: These are duties prescribed by the state law. In sending home pupils for any of the above

KINDERGARTNER'S LAMENT

School has started, peace departed, days of work have now begun; memory fails me, dread assails me, I forget names one by one; Samuel Cowan, Elsie Rowan, Lizzie Murphy, Isaac Yerfi, Simon Gadske, Lyman Bradsky, Howard Weil and Sidney Pyle; Jimmy Young, Lee Fong Chung, Fedor Hadj, Faustina Rasch; Hilda Anderson, Maude Sanderson and others by the score; Sadie Brody, Max Yerodi, Greta Dane and Sylvia Fain, Leslie Austin, Susan Crosston and at least a dozen more; wipe each nose and find their clothes and see each hat is on each head; meet them smiling, fear beguiling, meanwhile wishing I were dead; I'm so tired, hope I'm fired, while I teach the Golden Rule; change their sweaters, drop my fetters, thank heaven I don't sleep in school!

— Esther L. Schwartz

causes, the principal, superintendent, and parent or guardian should be notified either in person or by note.

7. To keep a lesson-plan book in which to plan their work a week ahead, this book to be kept in their desks available for the superintendent and substitute teachers. No matter how familiar the teacher is with her work, no teacher should go to class without first looking over the material which she proposes to teach. She should decide beforehand what material she is going to teach, how she is going to teach it, what points are to be emphasized, and to check the work that has been taught.

8. *Teacher Absences.* To report absences for illness to the superintendent who will provide substitutes. Likewise, arrangements for teacher's absence, whatever the cause, would be made with the superintendent.

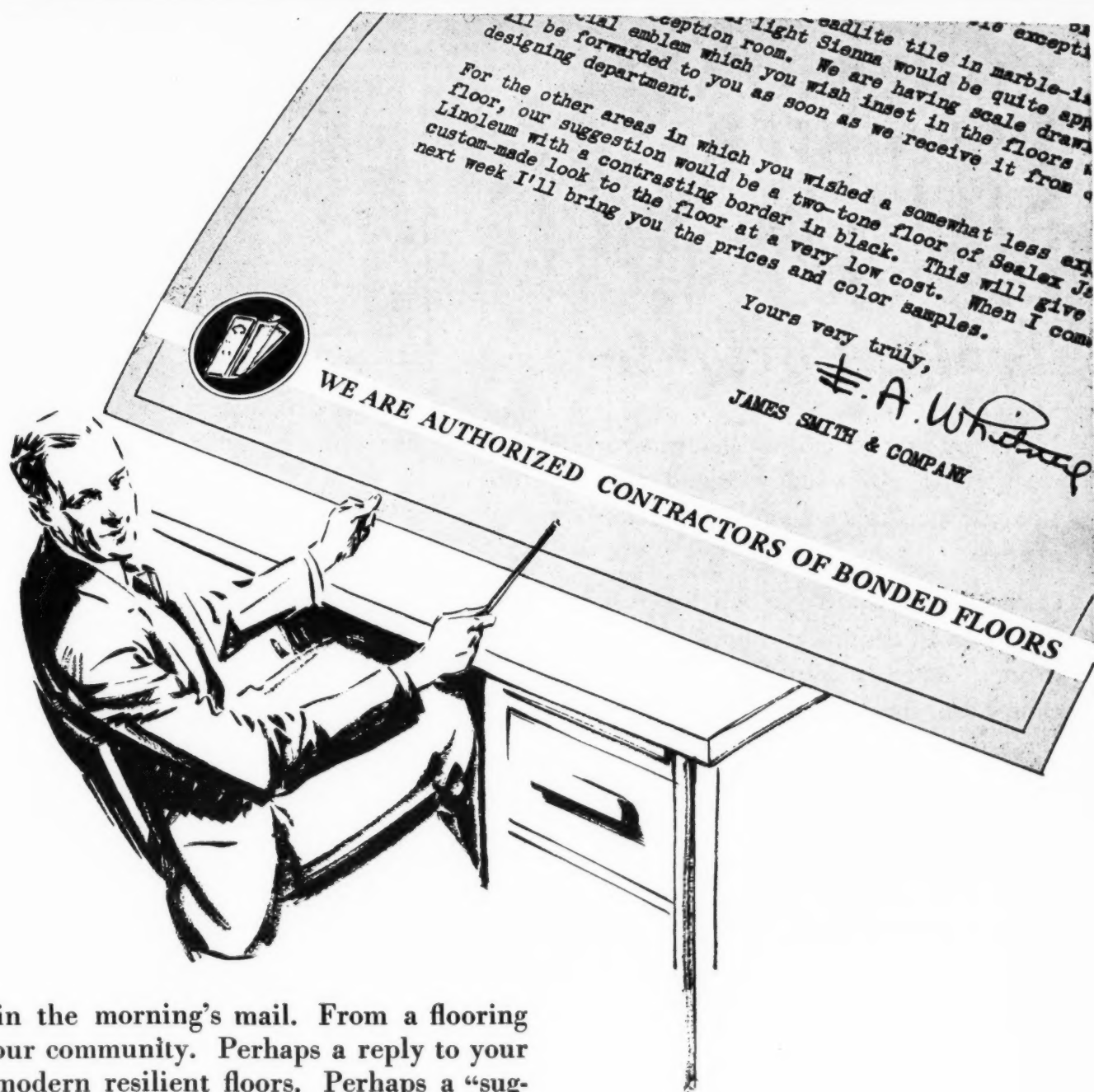
9. *Coöperation with Principal.* To follow the instructions of their respective principals unless by chance the latter should request something contrary to the direct orders of the superintendent or board of education.

10. *Coöperation with Special Teachers.* To take note of the requests of special teachers and supervising teachers who are representatives of the superintendent. Requests from such teachers are his requests. If there are any objections to such requests, the matter should be brought to the attention of the superintendent before refusal to comply is made.

11. *Sending Pupils on Errands.* To send pupils on errands during school hours only on urgent school business, in which case a privilege card should be issued by the teacher which in turn should be countersigned by the principal or superintendent.

12. *Sending Pupils from Room.* To send pupils from classrooms only when such appears to be a necessary disciplinary measure, in which case they should be sent directly to the principal or superintendent bringing with them a disciplinary note stating definitely why they are sent. During the teacher's free period which follows, the teacher

(Continued on Page 74)



A LETTER in the morning's mail. From a flooring contractor in your community. Perhaps a reply to your inquiry about modern resilient floors. Perhaps a "suggestion letter," pointing out how easily and inexpensively old, worn-out floors may be covered with colorful, comfortable Bonded Floors.

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(Continued from Page 72)

should see the principal or superintendent about the case. *Never* simply send a pupil from class. (Special forms are issued for this purpose.)

13. *Daily Programs in the Grades.* To send to the office, within a week after school begins, detailed copies of their daily program. A copy of the program should be displayed in each room at all times and all contemplated changes should be referred to the superintendent before such changes are made.

14. *Hall Duties.* To assume a post outside their classroom doors and assist in maintaining order while pupils are passing to and from classrooms and at dismissals.

15. *Housekeeping.* To attend to the ventilation and temperature of classrooms, adjust window shades, etc. Shades should always be raised excepting in cases of direct sunlight or strong light which pupils may be required to face.

Whenever the ventilation plant is not functioning, the rooms should be aired at each intermission. When this is done, keep classroom door closed.

16. *Assembly-Room Charts.* All high-school teachers having charge of the assembly room should make a chart showing the names and places of pupils in assembly-room periods, and check the attendance each period.

17. *Pupils Leaving Room.* Teachers should guard against allowing pupils to leave the room too often or unnecessarily. Unless the teacher is careful in this respect, pupils will continually and habitually ask to leave the room simply to take a walk or wander about. Where the latter seems evident on the part of the pupils, they should be requested to *make up all time lost* and more if they continue to abuse the privilege.

18. *Report Cards.* To have their work so planned that report cards may be issued on the Monday following the month or period for which the card is made out.

19. *Discipline.* (a) To be discreet and judicious in all matters of discipline, avoiding haste and prejudice but at the same time firmly insisting on good order.

b) To pay special attention to habits and manners of pupils. Pupils should come to order promptly when the second signal has rung.

c) To insist on *quickness of movement* on the part of students. Physical quickness and alertness tend to produce mental quickness and alertness.

d) Initial discipline is important. The attitude which a teacher takes toward her class the first few days will determine largely the problems she will have to face later. It is better to begin with relatively high standards of discipline and then make more liberal adjustments than to begin work in an easy, indifferent, happy-go-lucky manner, and then later find it necessary to lay down drastic rules to maintain discipline. Let the pupils feel that the teacher means business, that she expects to be fair and expects in turn that they will play fair with her. The teacher should deal with problems herself whenever possible. Inform the superintendent of any drastic action which it has been necessary to take or which is contemplated.

Teachers should learn, above all, to *govern themselves well.* (See bulletin on Discipline).

Punishment. Some form of punishment will probably be necessary at times and no phase of the teacher's work demands more careful deliberation, tact, and good judgment than the infliction of a punishment. *Corporal punishment* should always be avoided except in extreme cases. It is advocated less and less by thoughtful and experienced teachers. All cases requiring corporal punishment should be referred to the superintendent or principal for advice. The promiscuous use of ridicule, sarcasm, and irony indicates a wrong spirit on the part of the teacher, and is likely in turn to develop a wrong attitude on the part of the pupils. Some teachers can use these means very effectively, while others only make matters worse by the use of same.

Deportment. To refrain from reducing a pupil's grade in his academic work because of deportment. Scholarship marks are intended to be, and so far as possible should be, reliable records of the pupil's knowledge of certain subject matter. When these records are changed for purposes of punishment, they cease to be such. Truancy may be

punished by requiring the pupils to make up all lost time and work outside the regular class period.

20. *P. T. A. Meetings.* To attend P. T. A. meetings held during the year and to make an effort to get acquainted with the parents.

21. *School Census.* To check over the school census as soon as it reaches the respective grades and to report all pupils enrolled who are not listed and vice versa.

22. *Sections.* To section classes on the basis of ability where possible to do so.

23. *Excuses.* To require excuses in person or by written note from parents or guardians of pupils who have been absent or tardy, which notes should be filed for future reference. Whenever a pupil fails to bring a required excuse, or if the excuse offered is doubtful or unsatisfactory, the same should be verified by getting in touch with the parent or guardian.

High-School pupils who have been absent or tardy shall not be admitted to classes without a signed excuse from the office on forms provided for this purpose.

24. *Care of Equipment and Books.* To exercise reasonable supervision over furniture equipment, and apparatus in their rooms and over texts owned by the school. Unwarranted damage to equipment should be reported to the principal who should assess and collect a fine which will repair or replace the item damaged. Try to stimulate in students a regard for school and public property. Proper care and decoration of the school-room and tidiness of their persons will tend to accomplish this end.

25. *Aiding the Janitor.* To aid the janitor insofar as is possible, by enforcing all orders concerning the disposal of waste paper, pencil shavings, etc., and by keeping rooms neat and tidy. Pupils should not be allowed to tear sheets of paper into bits and drop these on the floor where they are likely to be scattered. Teachers should see that pupils do not leave the room in an untidy condition. Before the period closes the teacher in charge should see to it that books, magazines, and newspapers are returned to their proper places and that waste paper, etc., is disposed of so that the room is in tidy condition for the next period.

(Continued on Page 76)



VALUE at your WINDOWS

*isn't THAT what you want for
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BECAUSE it is now possible to secure silent, sound-proof, mechanically operated folding partitions for separating rooms or bringing them together safely and satisfactorily. These HORN SELF-FOLD PARTITIONS are being used all over the United States, increasing numbers being installed each year.

SEE PHOTOGRAPH. The left partition separates an auditorium and gymnasium. The right partition divides the gymnasium. Notice the convenient pass doors.

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(Continued from Page 74)

26. *Detaining Pupils After Class.* To notify the next teacher when detaining a pupil at the close of a class that he is late to his next period class. The teacher detaining the pupil should issue a privilege card to the pupil explaining the detention to the next teacher. (It is not necessary in this case for the pupil to report first to office.)

27. *Housekeeping.* To keep the classrooms tidy. Classrooms should show good housekeeping; desks should present an appearance other than chaos especially when left for the day. The compartments in the teacher's desk should have some arrangement so that material needed can be secured without turning everything topsy-turvy. Pupils notice these things—they are learning habits—slipshod or otherwise.

28. *Supervision.* To invite supervision. Supervision will be of two types, casual and specific. In either case the teacher is to feel that the supervisor desires to help her rather than look for faults. The supervisor desires to see the teacher at her BEST not at her worst. Invite him to classes—don't wait for him to come.

29. *School Hours.* To remain in classroom a reasonable length of time after dismissal. Do not rush away immediately at the 3:50 dismissal. Pupils may need special help. Plan to stay at least a half hour or more. "The person who is always afraid of doing more than he is paid for will never be paid for more than he does."

30. *Exploration.* To plan her work. The first week's work will be largely exploratory. Find out what the pupils know and what they lack. Teach what they need rather than the order in which subject matter is contained in the text. Get a bird's-eye view of the class and its problems. Set a goal and aim to achieve results.

31. *High School Absence and Tardiness Permits.* To observe attendance rules. (a) After an absence from school of one period or more, students are required to report as soon as they return to school to the superintendent's office and receive permission to be reinstated in their classes. If their reason for absence is worthy, they will receive an excused permit, which gives them the

privilege of making up work which they failed to do during their absence. The limit of time allowed for make-up work shall be equal in length to the period of excused absence. If the reason for the absence is unworthy, an unexcused permit will be issued, which gives the student zero for each recitation missed. Each *unexcused absence* counts three per cent off the daily average for the six-weeks' term.

b) If a student is tardy he likewise reports to the superintendent's office and receives permission to enter class. An excused permit gives the student the chance to make up the work missed, but an unexcused permit gives the student zero for the class period for which he is tardy and counts one per cent off the daily class average.

c) Teachers are required to keep a permanent record of all absences and tardiness and to report same. During or at the close of each school day they are required to bring or send to the office a carefully made-out slip of those absent or tardy during the day and file them with the attendance secretary.

d) When a pupil is tardy fifteen minutes or more, such tardiness constitutes an absence.

32. *Mail.* To call at the office at the opening of school both in the morning and at noon for any mail or notices which may have been placed in the mail box. By so doing, teachers will help simplify routine matters and be informed as to important notices, meetings, etc. (Make this a habit.)

33. *Keys.* To bring her keys with her. If teachers borrow the office duplicates, it is essential that they be put back on the key board.

34. *Memorandum Slips.* To sign memorandum slips. A memorandum will be used from time to

IMAGINATION

"Imagination is the beginning of any form of activity that is worth while. As we look upon life in America today, I believe we can truthfully say that our greatest lack is in imagination."—Joseph Lee.

time and usually posted on the bulletin board. On this form teachers are asked to check their names to indicate that the item called for has been attended to.

35. *Extracurricular Activities.* To assist in extracurricular activities. These will be apportioned among the teachers according to previous experience and training and teaching loads. Reports are required for the various activities from time to time and these should be turned in promptly.

36. *Bulletins.* To read bulletins. We shall continue to be guided in our teaching by *Bulletins* which will be issued from time to time. These are to be read by the teachers and filed for future reference. Be prepared to suggest topics on which bulletins are desired. Some bulletins may be a repetition of those issued last year, some will be revised, and some new. There will also be a professional reading shelf reserved in the office from which teachers may check out material relating to problems in which they are interested.

37. *Visiting Days.* To report visiting days. The plan to be followed for visiting days is as follows:

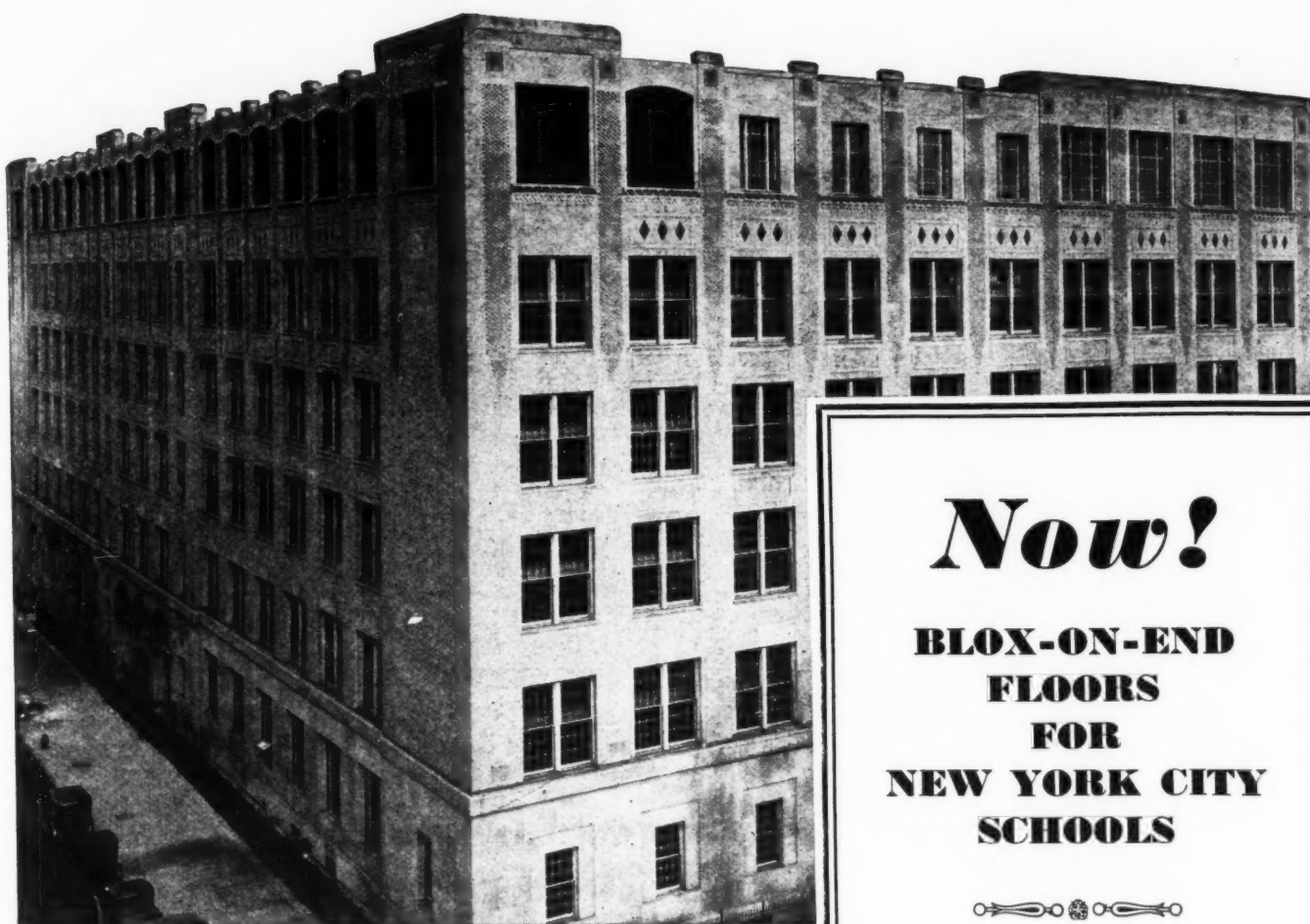
a) The teacher indicates city, school and grades he proposes to visit, to the superintendent who is to approve the same. (We want to visit such schools where such visits will in turn benefit the work in our own system.) Teachers' preferences will be carefully considered.

b) The superintendent will write the superintendent of the school to be visited informing him of the teacher's intended visit and ask him to notify the teacher to be visited, so that the work observed will be at its best and of greatest benefit to the visiting teacher.

c) An oral report must be given to the superintendent concerning the teacher's visit upon his return.

Note: By following the conditions listed, both the visiting teacher and our schools, it is hoped, will receive practical benefits and such visits will not be a mere farce, a friendly visit of good friends.

(Concluded on Page 79)



IN FINER SCHOOLS EVERYWHERE

Bloxonend is the one flooring material that combines beauty, long life, safety and utility. Its end-grain surface stays smooth and is resilient, fast and comfortable under foot. No slivers or splinters.

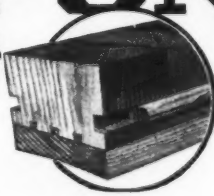
Bloxonend Flooring is widely used in handball and squash courts. Nearly all prominent school architects specify it for gymnasiums and school shops.

Write for specifications

CARTER BLOXONEND FLOORING COMPANY
KANSAS CITY, MISSOURI

Representatives in Principal Cities

BLOX-ON-END FLOORING



Bloxonend is made of Southern Pine with the tough end grain up. It comes in 8 ft. lengths with the blocks dovetailed endwise onto baseboards.

*Lays Smooth
Stays Smooth*

*Leading School Architects specify
Bloxonend Floors for Shops and
Gymnasiums in the country's best
schools.*

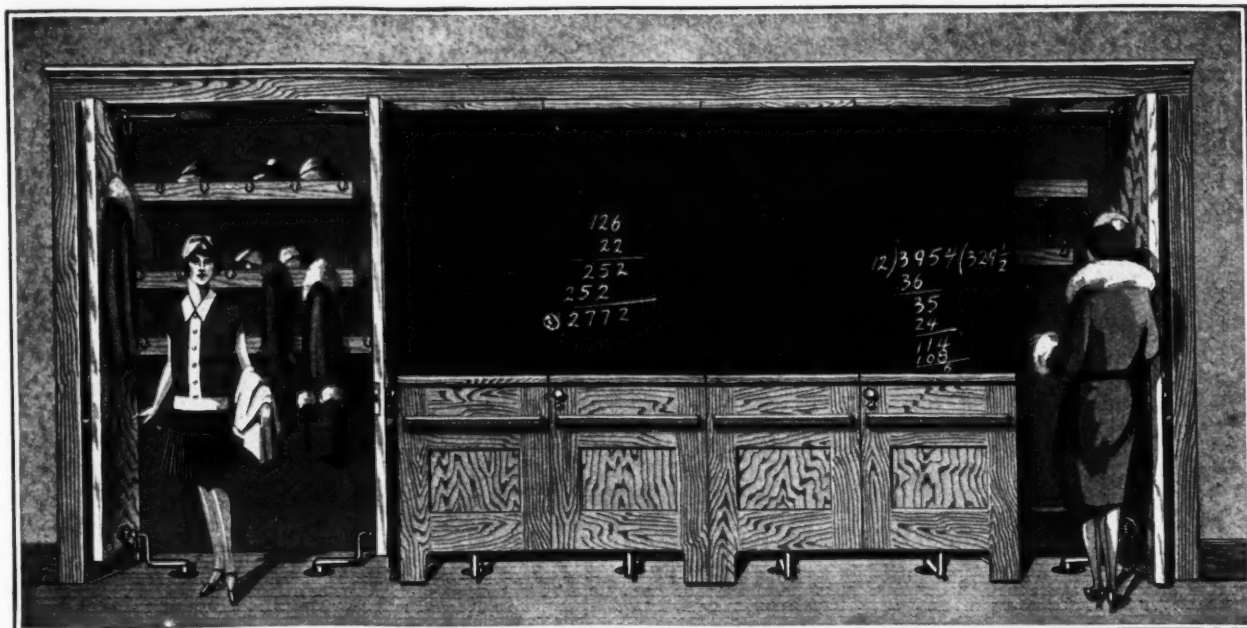
Now!

**BLOX-ON-END
FLOORS
FOR
NEW YORK CITY
SCHOOLS**



The two big gymnasiums (Boys' & Girls') in Seward Park School, illustrated above, have been floored with BLOX-ON-END.

Dr. A. P. Way, Department of Health Education, New York City Board of Education. W. C. Martin, Architect.



Save space . . .

and improve classroom ventilation with R-W School Wardrobes

You can save floor space and considerably reduce the cost of heating school buildings with R-W Disappearing Door Wardrobes. Eliminate ordinary cloakrooms altogether . . . wraps are kept in the classroom, free from the possibility of pilfering. Ventilation is greatly improved by air currents which pass under and through R-W wardrobes, carrying odors, dampness, and germs from clothing out through ventilating grills.

Another distinguishing feature of R-W equipment is the continued easy, quiet, trouble-free operation

assured by special designing. Compound Key Veneered flush or panel doors are guaranteed against warping, swelling, and rough usage.

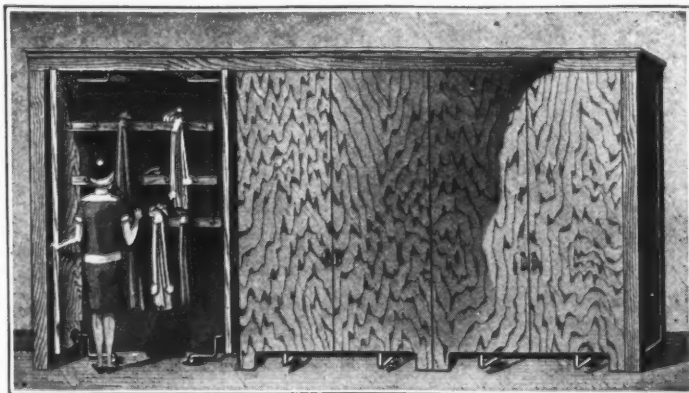
Richards-Wilcox assumes full responsibility for complete wardrobe installations with disappearing doors in any wood finish, with or without continuous blackboards, as illustrated and described in Catalog No. A-53.

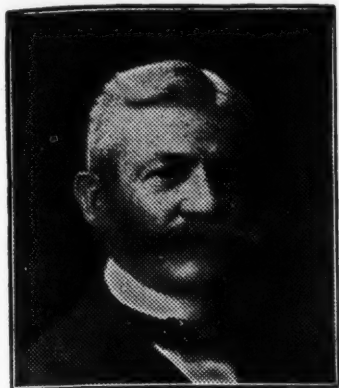
Send today for your free copy of this new catalog profusely illustrated in colors and containing floor plans of many types of R-W wardrobe installations.

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Increasing the lives of the Text Books
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Waterproof and Weatherproof

**Provide a "HOLDEN" for all new books
and those in good condition**

Holden Patent Book Cover Company

Miles C. Holden, President

Springfield, Massachusetts

(Concluded from Page 76)

38. *School Stationery.* To refrain from using school stationery. School stationery and envelopes are to be used *only for official school business*, not for personal correspondence or personal business. If teachers desire to use a form of school stationery the same can be printed up at a nominal cost.

39. *Telephone Calls.* To charge personal telephone calls to the home telephone. Personal charge calls should have charges placed on teacher's home telephone preferably, or the charge paid at the office.

SCHOOL LAW

Schools and School Districts

A school district is a political subdivision of the state, created for the convenient dispatch of public business, and is a public corporation. — *McNair v. School Dist. No. 1 of Cascade County*, 288 Pacific reporter 188, Mont.

A county board of education could not arbitrarily and for tax purposes only transfer the territory of one school district to another (Ohio general code, §4736, as enacted in 1914, Ohio laws 104, p. 138; §4692, Ohio laws 106, p. 3971). — *Heaton v. Jackson*, 171 Northeastern reporter 364, 34 Ohio Appellate, 424.

School-District Government

A board of school trustees may exercise only the powers expressly conferred upon it by statute and those necessarily implied. — *McNair v. School Dist. No. 1 of Cascade County*, 288 Pacific reporter 188, Mont.

School directors may exercise only the powers expressly granted by statute, or resulting by fair implication from granted powers. — *School Dist. No. 106 of Clackamas County v. New Amsterdam Casualty Co.*, 288 Pacific reporter 196, Oreg.

A statute requiring the submission of controversies arising in the administration of school laws to county and state superintendents does not apply

where the trustees attempted to act without, or in excess of jurisdiction (Mont. revised codes of 1921, §966). — *Nichols v. School Dist. No. 3 of Ravalli County*, 287 Pacific reporter 624, Mont.

School-District Property

The authorization given by electors to the trustees of second-class school districts to issue bonds gave no implied authority to purchase a site for a school building, and the trustees' action in purchasing and locating the site, without being directed to do so, was void (Mont. revised codes of 1921, §1014, and §1015, as amended by the laws of 1923, c. 122). — *Nichols v. School Dist. No. 3 of Ravalli County*, 287 Pacific reporter 624, Mont.

That a statute relating to the leasing and acquisition of school buildings is valid does not make every contract made in pursuance thereof valid. — *Hively v. School City of Nappanee*, 171 Northeastern reporter 381, denying a rehearing 169 Northeastern reporter 51, Ind.

School-District Taxation

A just policy demands that a taxpayer shall receive a tax benefit. — *Farned v. Bolding*, 128 Southern reporter 435, Ala.

A board of education lawfully incurring debts to operate the school has power to repay the debts from any fund lawfully applicable thereto. — *Board of Education of Houston County v. Board of Trustees of Ft. Valley Consol. School Dist.*, 153 Southeastern reporter 214, Ga.

Where the trustees of a school district attempted to select a building site without authority, the statutory remedy by appealing to the county and state superintendents (Mont. revised statutes of 1921, §966). — *Nichols v. School Dist. No. 3 of Ravalli County*, 287 Pacific reporter 624, Mont.

An injunction is held a proper remedy where the trustees of a school district, without authority, purchased a site and were preparing for the erection of the building. — *Nichols v. School Dist. No. 3 of Ravalli County*, 287 Pacific reporter 624, Mont.

School-District Claims

School districts in corporate capacity have the power to sue and defend suits brought against them. — *School Dist. No. 106 of Clackamas*

County v. New Amsterdam Casualty Co., 288 Pacific reporter 196, Oreg.

Teachers

Leaving a teacher's application for service retirement with a teacher member of the retirement board at her home is held a sufficient delivery (Greater New York charter, §1092, subd. Kl-a-b, subd. C5). — *In re Gulick's Will*, 241, N. Y. S. 421, N. Y. App. Div.

A teacher's service retirement is effective by the delivery of the application therefor in accordance with the statute (Greater New York charter, §1092, subd. Kl-a-b). — *In re Gulick's Will*, 241, N. Y. S. 421, N. Y. App. Div.

A pension law should be construed liberally and favorably toward the applicants. — *Ward's Ex'rs. v. Teachers' Retirement Board*, 241, N. Y. S. 535, N. Y. Sup.

A teacher in a consolidated district is not obligated to discontinue teaching, merely because the average attendance of the particular month falls below five (Hemingway's code of 1927, §8747). — *Alexander v. State*, 127 Southern reporter, 696, followed in *State v. Alexander*, 127 Southern reporter 699, Miss.

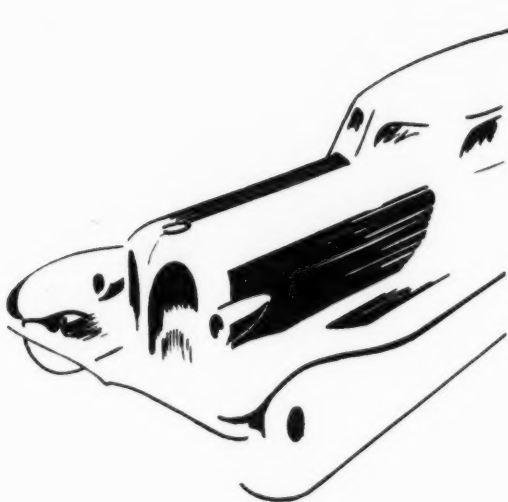
The power of a school board to remove a teacher cannot be contracted away. — *Baird v. School Dist. No. 25, Fremont County*, 287 Pacific reporter 308, Wyo.

The power of a school board to appoint a teacher carries with it the implied power to remove the same teacher, unless it is limited or restricted (Wyo. complete statutes of 1920, 2330). — *Baird v. School Dist. No. 25, Fremont County*, 287 Pacific reporter, 308, Wyo.

The finding of a school board, after a notice to the teacher and a hearing, of the existence of a reasonable cause for discharging a teacher, was held conclusive. — *Baird v. School Dist. No. 25, Fremont County*, 287 Pacific reporter 308, Wyo.

Since the statute makes no provision as to the method of removing teachers, the power to adopt the means necessary to effectuate the power of removal is conferred as incident thereto, and the removing power may adopt its own procedure. — *Baird v. School Dist. No. 25, Fremont County*, 287 Pacific reporter 308, Wyo.

THE MODERN TREND



The earliest automobile was a "Horseless Carriage"—simply a primitive beginning.

The automobiles of ten years ago, good as they were, do not compare with the splendid motor cars of today.

The first automatic telephone systems were of course primitive.

Those used widely ten years ago—and many in use today, do not compare in satisfactory service with the modern NORTH "ALL-RELAY" automatic telephone system.

Harvard University, Duke University, Washington State Normal School, Wellesley College and scores of other schools and colleges in all parts of the United States have INVESTIGATED and adopted NORTH equipment.

THE MODERN TREND is toward the newer and better things—get the facts about this MODERN NEW-PRINCIPLE Automatic Telephone System for schools.

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BUILDING NEWS OF THE SCHOOLS

BEYOND THE BLUE PRINT

Seven vital qualities and services, which are intangible, but which are essential for the success of architectural service, are stated in a recent circular of the Illinois Society of Architects. These seven factors which constitute the equities of architecture, are of interest to school boards who are employing architectural service.

1. *Natural Ability* consisting of visualizing power; an aesthetic sense; mathematical understanding; judicial mind; qualities of leadership.

2. *Integrity* to select materials on the basis of scientific merit, artistic adaptability, and relative cost, to render an impartial interpretation of plans and specifications; to form correct judgment between disputing contractors; to use unceasing vigilance to the end that the client receives everything due him, and at the same time, that the contractor and craftsmen are justly treated.

3. *Educational Background* consisting of: Training in social science; a working knowledge of the history of building down through the ages; training into an understanding of the strength and mechanics of materials; training in the art of design and depiction, including both draftsmanship and the written word; travel and study of the masterpieces of architectural art.

4. *Practical Experience* as: A student employee; a graduate office worker; and as a practicing architect, including the handling of the business of building, with required incidental knowledge of contract and lien laws.

5. *Working Library* containing: An indexed file of current architectural magazines; textbooks on structural and aesthetic subjects; many architectural books required for immediate use; an index of all the more important architectural books and where they can be consulted; a completely indexed catalog of building materials and equipment.

6. *Organized Assistants*, especially trained and

equipped for each department of the work required to be handled by an architect.

7. *Impersonal Professional Attitude* toward each building problem; no financial interest either in building materials or in contracting makes possible skilled, unbiased judgment; architect's remuneration not contingent on whether the advice pleases or displeases the client or the contractor; in other words, expert judgment expressed without personal interest.

These seven factors constitute the *Equities of Architecture*.

OUR PUBLIC BUILDING-CONTRACT SYSTEM

Mr. John W. Harris, of New York City, a building contractor of wide experience, calls attention to a serious defect in our legal system of letting contracts for public buildings, which permits any contractor, regardless of experience and reputation, to be awarded large contracts. Writing in *The General Building Contractor*, Mr. Harris observes:

"In all government and other public work, contracts are awarded on the basis of the lowest

CAN YOU AFFORD TO PICK AN ARCHITECT ON PICTURES?

Pictures are not architecture. Pictures, like words, are only a medium of expression; and like words, they may also convey untruths, only with more subtle harm. Thus, the layman should never select his architect solely on his judgment of drawings submitted.

It is because architecture is a science of thought and action—rather than the mere penciling of lines on paper—that architects of standing either hesitate or refuse to submit drawings for proposed work in open and unregulated competitions where the drawings are not restricted by definite program and judged by those who are technically skilled.

responsible bid. This is true of all purchases, including new construction. In all other industries competition is arranged on the basis of a reasonable classification of the competitors. Thus, when the government is in the market for a truck, certain specifications are set up and companies who manufacture trucks conforming to these specifications are expected to bid. The makers of other types of trucks are not interested.

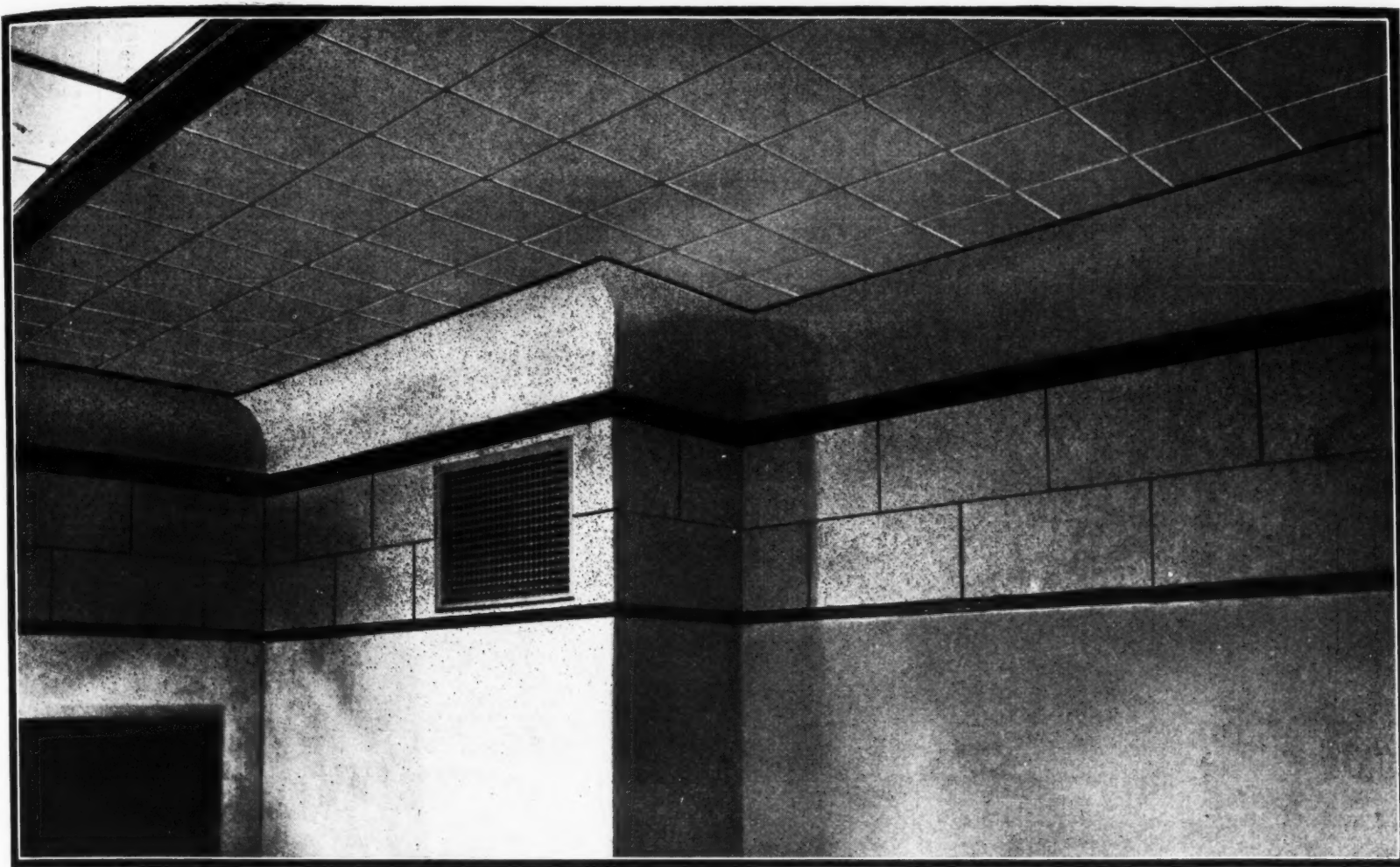
"When the government announces, however, that bids are to be asked for a public building, any contractor in the country, regardless of his experience in the type of building to be erected, may submit a bid, and if he can obtain a surety bond, is likely to be awarded the contract provided his bid is low.

"Right here is an opportunity for constructive action by the national, state, and local governments in the establishment of certain requirements of responsibility and experience, without which contractors shall not be permitted to bid. An essential requirement, in my opinion, should be a good record of performance in completion and in the character of work on previous, similar contracts for public and private accounts. Contractors, likewise, should be required to present with their bids, endorsements from responsible owners and architects for whom they have done work in the past, in respect to their supervision, their organization, and their financial position. In other words, it should be made impossible, by legislation if necessary, for an irresponsible, unfit, and inexperienced man or firm to compete for work which requires all those qualifications for the proper fulfillment of the contract.

It is a fact that when a business man decides to erect a building, whether for his home or his business, he often forgets or ignores his ordinary buying habits. When he is in the market for an automobile, for example, he expects to pay more for quality than for mediocrity. But, when he comes to a building enterprise, the basic tests of superior workmanship—record and reputation—do not seem to enter into consideration. With no thought of discrimination and selection, he will throw his project into the open market, and invite

(Continued on Page 82)

A MESSAGE TO SCHOOL OFFICIALS FROM
THE UNITED STATES GYPSUM COMPANY



Study Hall, Skokie School, Winnetka, Ill. Hamilton, Fellows and Nedved, Architects, Chicago

Leading Educators realize the value of Quietness in Schoolrooms

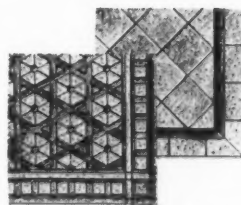
DISTRACTING noises in study rooms, libraries and auditoriums are now known to be a serious impediment to concentration and, consequently, the progress of students.

For this reason, Acoustone, the USG Acoustical Tile, has proved itself to be a splendid investment in many schools and educational institutions.

Acoustone is a sound absorbent material which may be quickly applied to old or new walls and ceilings without interruption to school activities. It virtually eliminates

the continued reflection and propagation of noises created in corridors, lunchrooms, gymnasiums, etc., which combine to make concentration difficult. Its use is becoming increasingly popular.

If you are interested in improving the study conditions in your school, we suggest that you permit one of our acoustical experts to visit it and analyze the possibilities for noise abatement in it—either by using Acoustone, or the USG System

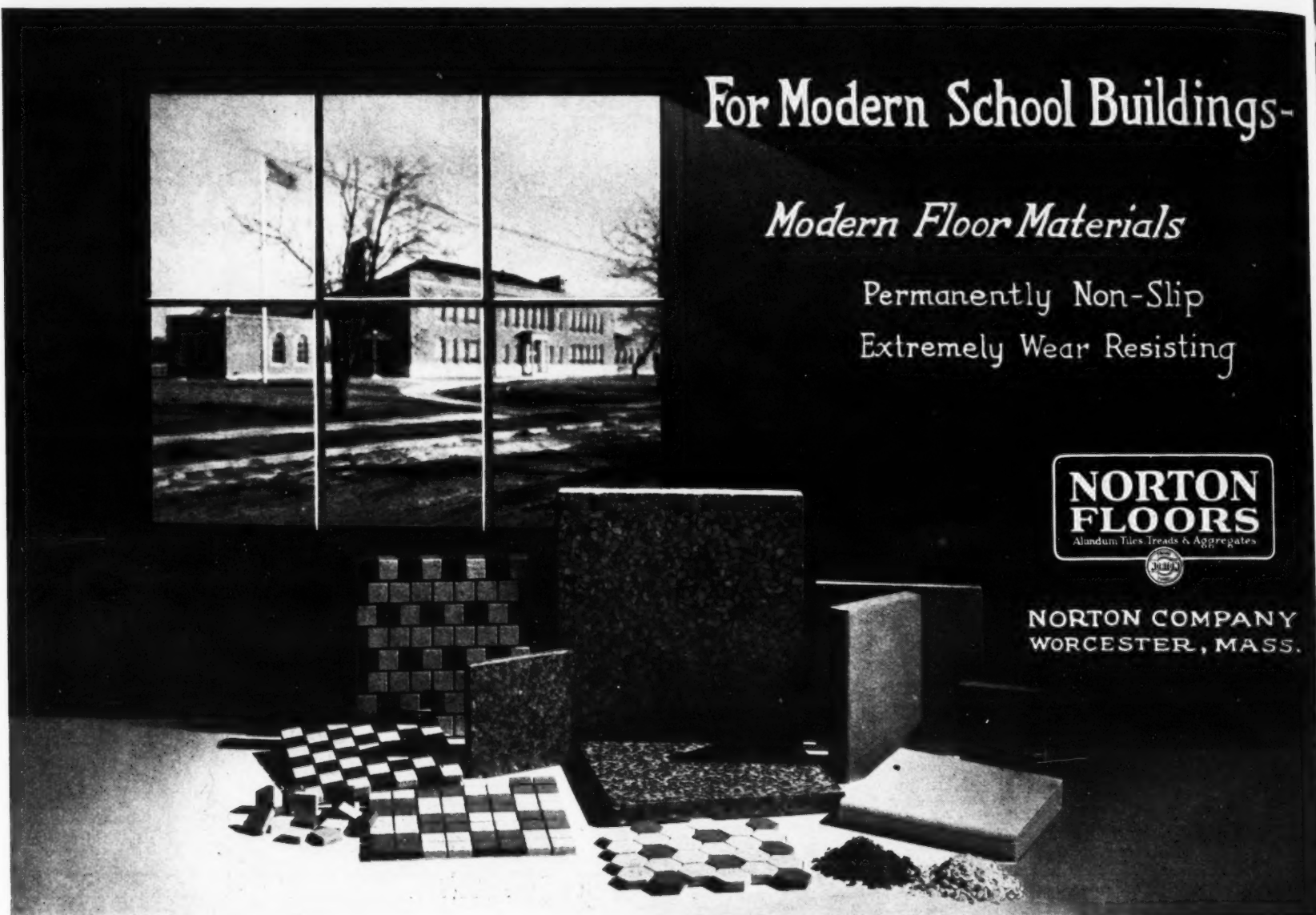


Acoustone may be had in many designs, patterns and color combinations which make its use highly desirable in connection with any type of masonry or other interior.

of Sound Insulation, or both. The survey will incur no obligation. And if the recommendation of our engineers is accepted, our experts will supervise the installation and the United States Gypsum Company will assure the result. Why

not write to us today, naming a date on which it will be convenient to have this free examination made? Please address us at Dept. 75N, 300 West Adams Street, Chicago, Illinois.

U.S.G.
A C O U S T O N E



For Modern School Buildings-

Modern Floor Materials

Permanently Non-Slip
Extremely Wear Resisting

NORTON FLOORS
Aluminum Tiles, Treads & Aggregates

NORTON COMPANY
WORCESTER, MASS.

(Continued from Page 80)

all and several, good and bad, to submit a bid. The successful bidder may, or may not, have the experience and organization to do the job, but one thing is certain; if the wrong contractor gets the job, it is almost inevitable that a loss will result, and the owner usually will be the heaviest loser. An incompetent contractor submitting a bid based on guesswork or the willingness to take a chance, hopes that delays, skimping of work, and "extras," for which he can charge his own price, will save him from loss. Even if this type of contractor succeeds in averting disaster to himself, the loss to the careless owner who gave him the work may be none the less serious, due to delays holding up revenue on the building. Inferior workmanship also will be an increasing source of annoyance and expense throughout the life of the building, and the "extras" not contemplated when the building was laid out are likely to run into real money.

"The architect should be in control of the entire situation in the construction of a building, because he has been commissioned by the owner as his professional adviser and representative. He knows the building conditions in his city. He knows the builders best suited to the type of work contemplated, and they, in turn, know that the architect is exceedingly desirous of having a builder who will deliver a workmanlike job in the shortest possible time at the lowest possible cost. This is elementary."

ADOPT SCHOOL-BUILDING PROGRAM AT BELLEVUE, PA.

The school board of Bellevue, Pa., has recently adopted an extensive school-building program, providing for the erection of a high school and the complete remodeling and modernizing of the school plant.

The financing of the building program will be carried out by means of a bond issue of \$450,000 approved by the voters at the spring election. The school board has expended \$28,000 for the improvement of the school buildings and for more adequate equipment during the past two years.

BUILDING NEWS

♦ Blair, Nebr. A new high school was dedicated recently. The building, which is considered one of the finest in the state, contains a fine auditorium, with a capacity of nearly a thousand persons. During the past summer, the grounds have been landscaped so that the building presents a fine appearance.

♦ Niles, Ohio. The school board has purchased an old office building at a cost of \$3,500, to be remodeled and used for housing the school administrative staff of the school system. In addition to providing more space for the school offices, the building will release two rooms in the high school for classes.

♦ Birmingham, Mich. At the invitation of the school board, the Michigan Inspection Bureau recently made an insurance survey of the school buildings, and recommended that 80 per cent coverage be carried on the buildings. On the 80 per cent basis, the insurance on school buildings would be increased from \$95,000 to \$1,094,683,

with premiums of \$3,527 on buildings, and \$98,000 on contents.

♦ Hollidaysburg, Pa. The school board has purchased a site for a new senior high school. The high-school enrollment which is above the average for cities of the size of Hollidaysburg has been growing to the extent that a new building is necessary. The 1930 graduating class numbered an even 100 students.

♦ Beloit, Wis. The school board of Beloit, Wis., has adopted a uniform plan of fire insurance placed through a single agency in mutual companies by means of a blanket policy. Under the plan, the total amount of insurance has been increased from \$646,700 to \$1,005,050, with a reduction in premiums of \$650 per year. On the west side, the windstorm insurance has been increased \$67,100 though the premium insurance has been reduced nearly \$50 a year. The east side has taken out \$468,550 worth of insurance, at a premium of \$223 per year.

(Continued on Page 84)



TOLLESON GRAMMAR SCHOOL, TOLLESON, ARIZONA

The new grammar school at Tolleson, Arizona, is located on the Yuma Highway, eight miles from Phoenix, in a thriving agricultural and dairying community, and serves the needs of children of grammar-school age. The building is one-story in height and was erected at a cost of \$45,200. The contract for the building was let in October, 1928, and the structure was completed and occupied in December, 1929.

Each block is a complete square or rectangular unit of three or more flooring strips, in oak, walnut, maple, beech, light and dark Philippine mahogany, yellow pine, either beveled or square edge, $6\frac{3}{4}$ " to 13" squares, $13/16$ " thickness, all grades. Rectangle sizes $6" \times 12"$, $6\frac{3}{4}" \times 13\frac{1}{2}"$; also in maple $6\frac{1}{2}" \times 13"$. *CELLized by a chemical treat, to reduce the tendency to change in size. Insect and decay resistant.



A very material saving in finishing cost is effected by Maple and Beech blocks, factory-sanded, and then *CELLized

Architects: Mann, Wagner & King, Little Rock, Ark. 40,000 square feet 9-inch *CELLized Blocks laid by R. Cluck Flooring Co., Memphis, Tenn.

WHERE durability of the floor is the first consideration, as in schools, department stores, chain stores, high class factories, etc., pre-sanded *CELLized wood floor blocks meet every requirement.

The unit block floor needs only to be laid in EVERBOND, a plastic cement, over concrete or any level sub-floor, before use. The appearance is highly pleasing, and the floor is durable, supporting constant heavy use with ease and noiselessness under foot. Cleaning, if necessary, and polishing may be accomplished in one operation by the application of hard paste-wax, rubbed with steel wool.

The unit block is rapidly laid and the floor is inexpensive in both original and upkeep costs.

Laid directly over concrete in EVERBOND, providing a sound-deadening, resilient base.

Sold through lumber dealers everywhere; manufactured by

E. L. BRUCE CO.	Memphis, Tennessee
THE LONG-BELL LUMBER CO.	Kansas City, Missouri
NASHVILLE HARDWOOD FLOORING CO.	Nashville, Tennessee
ARKANSAS OAK FLOORING CO.	Pine Bluff, Arkansas

***CELLized Oak Flooring Inc.**
MEMPHIS - TENNESSEE



Front and back of $6\frac{3}{4}"$ block

*CELLized wood floor blocks are guaranteed by *CELLized Oak Flooring Inc. Laid only by Licensed Flooring Contractors. The names of those licensed to use this label in your locality will be supplied upon request.



*CELLized planks and strip flooring are obtainable through licensees of *CELLized Oak Flooring Inc.



The windows in the Conant Hotel of Omaha are equipped with Hartshorn Window Shades

A hotel must select its furnishings not only to provide beauty and comfort for its guests, but also to obtain the maximum of value and service. That is why the Conant Hotel of Omaha, Nebraska, shaded its windows with Hartshorn Shade Cloth, mounted on Hartshorn Rollers.

STEWART HARTSHORN COMPANY
250 Fifth Avenue New York City

Hartshorn
Est. 1860

SHADE ROLLERS and
WINDOW SHADE CLOTH



(Continued from Page 82)

♦ Wautoma, Wis. By a unanimous vote of the members, the school board has entered into an arrangement with the state for the insuring of the school buildings. By giving its insurance to the state, the school board was able to effect a saving of 40 per cent in premiums.

♦ New York, N. Y. Fifty-one elementary and high schools now under construction, will be completed during the next school year, according to a recent report of Mr. Walter C. Martin, superintendent of school buildings. These buildings at completion will provide accommodations for a total of 79,617 students. Of the total number, Brooklyn will have fifteen schools, with 29,772 sittings, and Queens 22 schools, with 27,854 sittings.

In addition, plans have been completed for fourteen elementary schools, providing for 13,428 sittings, and five high schools and special schools, taking care of 4,504 sittings.

♦ The State Education Department of North Carolina has issued a report, showing that there are 22 of the little log schoolhouses remaining in the state. Of these, 19 are in Caswell county, and one each in Durham, Halifax, and Person counties. In 1928-29, there were 5,565 rural schools in use, which was 215 less than were in use during the previous year. Five years ago, there were 6,868 rural schools in use. In the past five years there have been erected 439 brick buildings for rural children, with a decrease of 1,742 frame and log schoolhouses.

During the year 1928-29, 178 rural schools, with 986 classrooms, were erected. These buildings which cost approximately \$3,000,000 were created at an average cost of \$16,636 each. During the previous year, more than \$4,000,000 were spent in the erection of 176 rural schoolhouses, at an average cost of \$24,000 each. There is a tendency toward the erection of brick structures, as well as an increase in the amount spent for building purposes.

♦ Belding, Mich. The school board has completed an addition to the high school, at a cost of \$125,000. The school will be reorganized on the

six-three-three plan, with supervised study as a feature.

♦ Calvin, Okla. A five-mill building levy made possible by legislation was voted by the citizens in the spring. The proceeds of the levy made it possible to have all of the school buildings repaired, painted, and made more attractive.

♦ Cleveland, Ohio. The school board has asked for approval to build and locate twelve portable school buildings in the yards of eight city schools. The present portable program is believed the largest one in recent years to be undertaken by the school board.

♦ An election in Hasbrouck Heights to authorize \$465,000 in school bonds has been declared void by the state commissioner of education of New Jersey. At the election six ballots were thrown out because of minor markings, which would have defeated the proposal if counted.

♦ The school board of Chicago, Ill., has awarded twelve contracts on the new Lane Technical High school, amounting to \$2,458,509, with a saving of \$386,227 as a result of new bids. The total cost of the school under the former bids would have amounted to \$5,326,303. The greatest difference in bids was on the carpentry work, where a saving of \$129,195 was effected. The school board authorized the business manager to award contracts for painting and decorating in 27 schools, at a cost of \$224,570.

♦ Hobart, Ind. The school board recently awarded a contract for a nine-room grade school, to cost \$60,000. Messrs. Buckley, Skidmore, & Wainwright, Hammond, Ind., were the architects.

♦ Detroit Lakes, Minn. Bonds have been voted for an addition to the high school, to cost \$120,000. Messrs. Sund & Dunham, Minneapolis, are the architects.

♦ Glendive, Montana. Mr. Jerome Boespflug was awarded the contract for a new high school in Dawson county, to cost \$225,000. Mr. J. G. Link, of Billings, Mont., is the architect. The building which is planned to care for 750 pupils, will be 254 ft. 11 in. by 60 ft. wide. It will include a gymnasium and an auditorium to seat 1,000 pupils. The building will be under the general super-

vision of Mr. G. E. Kidder superintendent of schools.

♦ Fargo, N. Dak. The school board has named a new grade school after the late Emerson H. Smith, a former school superintendent and closely identified with the civic life of the city. Mr. Smith served during the period from 1884 to 1891.

♦ Akron, Ohio. Upon the suggestion of School Architect M. M. Konarski, the school board has adopted a system of rotation of labor to give jobs to more men in the construction of schools.

The new plan will be followed in the construction of three proposed schools. Under the plan, 75 per cent of the men employed on school-construction work will work on a part-time basis, giving about twice as many men part-time work. It was estimated that more than 80 per cent of the men now employed on schoolwork are local residents.

♦ Painesville, Ohio. The school board has taken steps toward the adoption of a definite program of expansion and improvement of the school plant. The voters of the city will be asked to approve a bond issue of \$165,000 for school-building improvements at the fall election.

♦ Boston, Mass. An estimated saving of \$265,000 was effected this year in the building of four schools by specifying standard products in place of special type materials, according to a report of Mr. L. K. Rourke, superintendent of schoolhouse construction work. The saving effected will be applied to other school activities.

♦ Mr. James F. Rockett, superintendent of schools of Woonsocket, R. I., in a recent report to the school board, calls attention to the adoption of fire protection measures for the schools. Every school has been equipped with a fire sprinkler system. Every exit door has been provided with an emergency fire exit stop, and over 90 per cent of the classrooms have been furnished with metal ceilings.

♦ Burlington, Iowa. The school board has adopted a budget, amounting to \$499,000 for the next school year. The new budget is \$3,500 less than that of last year. Of the total amount, \$456,500 will be raised by taxation, and the remainder will be obtained from state aid, tuition, and fines.

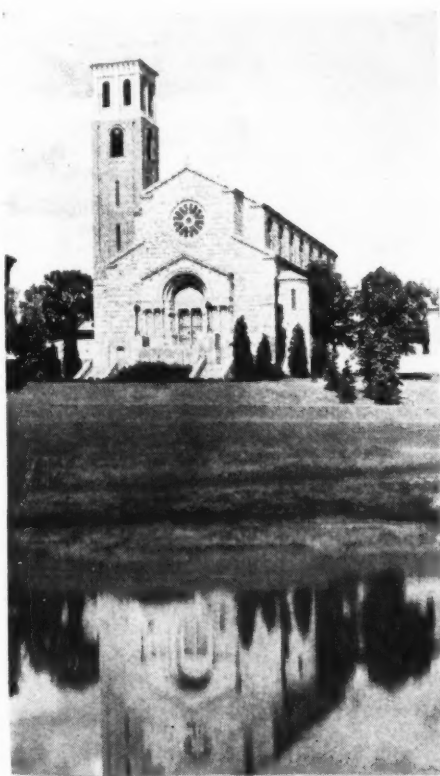
(Concluded on Page 86)

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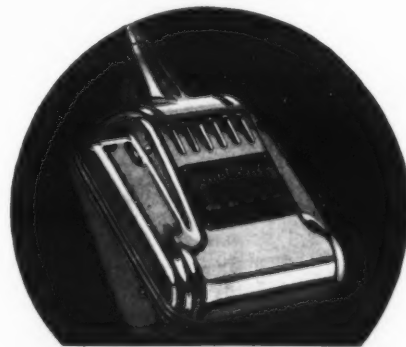
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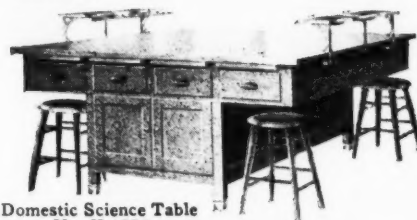
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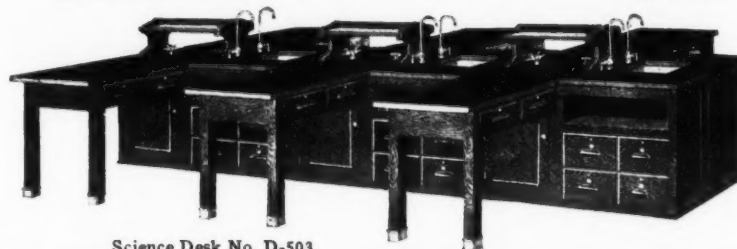
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(Concluded from Page 84)

♦ Belmont, Mass. The school board is completing an extensive school-building program. At the present time a 20-room addition to the junior high school is being completed, at a cost of \$260,000. Construction work has begun on an addition to one of the grade schools, which will be completed at a cost of \$181,000. Plans are also being completed for an additional grade school to be erected in the near future. The various building projects are the result of a building survey, conducted by Prof. L. Leland Dudley of Harvard University, in the year 1927.

♦ St. Joseph, Mich. The school board is in a deadlock over the period to be covered by a proposed school-building program. It appears that the members cannot agree upon the period of years to be covered, nor which part of the program should come first.

The threefold program calls for the erection of two grade schools, and an addition to the high school.

♦ Lyons, Kans. The school board which has been faced with a shortage of funds for the completion of a new high school, expects to suffer a loss of several thousand dollars through the recent failure of a Wichita bank. It was estimated the amount of deposit would reach \$15,000.

♦ The school board of Bucyrus, Ohio, has completed plans for a school-bond election to vote \$80,000 for the construction of additions for two schools.

♦ Youngstown, Ohio. The school board has estimated that 2,000 pupils will be housed in portable buildings, or will be placed on half-day sessions. The situation is attributed to the lack of funds for a building program and a failure to provide accommodations for a normal-attendance growth of 2,400 students.

♦ Waterloo, Iowa. The school board has proposed a redistribution of school-building insurance, under the coinsurance plan, with a blanket policy covering all the schools of the district. Mr. R. G. Holmes, chairman of the finance committee, has completed an analysis of the respective buildings, indicating the estimated savings to be effected under the new plan.

♦ Lyons, N. Y. A complete remodeling of the district school plant was completed during the summer, under the direction of Supt. Frank L. Miller, as a part of his regular supervisory duties. A total of sixteen schools were repaired and improved during the vacation period.

♦ Saranac Lake, N. Y. The school board has adopted a budget of \$213,398 for the school year 1930-31, which is an increase of \$4,784 over that of last year. The increase has been attributed to the increases in teachers' salaries, and to the addition of new teachers due to the growth in enrollment and the overcrowding of some classes. A total of \$7,500 has been appropriated for the upkeep and maintenance of the school property.

♦ Urbana, Ill. The school board has ordered a tax levy, calling for \$175,000 for educational purposes, and \$75,000 for building purposes.

♦ Mishawaka, Ind. The school board faces a difficult situation, with a balance of only \$153,350 on hand until next November, and a budget for the year exceeding the school tax by \$2,000. The situation has been attributed to a steadily increasing school population and decreasing tax valuations during the three-year period since 1927. In 1929 the tax valuation dropped from \$40,000,000 to \$37,000,000, while the school enrollment increased at the rate of 350 children a year. The tentative budget of the school board calls for an expenditure of \$507,000 and the total revenue from all sources will reach \$505,050. If the assessed property valuation goes to a lower figure in 1930, it will mean that the schools must ask for an increase in the tax budget from the present rate of \$1.22.

♦ Whitesboro, N. Y. The school board has adopted a budget for the school year 1930, amounting to \$96,351,000, of which \$34,684 will be raised by taxation. Of the total, \$58,750 will be devoted to teachers' salaries, and \$3,000 for maintenance of the school property.

HOW AKRON REDUCED THE SCHOOL BUDGET

On recommendation of Supt. Thomas W. Gosling, the 1931 school budget of Akron, Ohio, was cut \$43,000. A special tax levy is to be postponed. Mr. Gosling, who made the recommendation in recogni-

tion of the temporary money stringency, believed that rigid economy should be practiced until prosperity returns. His recommendations are:

1. That a temporary increase in the pupil-teacher ratio be made. This measure will effect a saving in the item of salaries for teachers, by reducing the number of teachers required to staff the schools.

2. That the John R. Buchtel High School be not opened to pupils until September, 1931. If this school is not opened until September, we may save the entire cost of operation for one term.

3. That the superintendent be authorized to institute such other economies as he finds practicable.

NEW YORK CITY SCHOOL BOARD ADOPTS HUGE BUDGET

The board of education of New York City has adopted a budget for the school year 1930-31, calling for an appropriation of 175,626,197, which is nearly 6,000,000 in excess of that for 1928-29. In addition, the budget includes an item of 39,000,000 for corporate stock for a school-building program.

The general school fund, which provides for salaries of the teaching and supervisory staffs, and attendance officers, totals \$120,620,364. The special school fund, which provides for the cost of all other items, includes a total of \$20,515,193.

In addition to the total sum of \$141,296,636, represented by the two school funds and the special items the balance of the budget includes \$22,638,707, the total of the debt service for the schools, covering interest and amortization of the corporate stock; \$7,616,632 as the city's contribution to the teachers' retirement system, \$824,157 as expenditures of the department of health, and \$1,420,300 for the department of water supply, gas, and electricity for school service.

Other items which entered into the school cost are \$451,073 for the retirement system, an increase of \$78,367 over the same item in the 1928-29 budget, and \$1,380,689 for the redemption of special revenue bonds and tax notes and anticipated to be authorized, which are redeemable out of the 1931 tax levy.



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SCHOOL FINANCE AND TAXATION

PER-CAPITA COST OF INSTRUCTION AT ROCKFORD, ILLINOIS

Supt. Frank A. Jensen, of Rockford, Ill., in a brief financial statement issued on August 1, shows that the per-capita cost of instruction was reduced 88 cents per pupil during the school year 1929-30, over the cost for the previous school year. The reduction in cost was made possible as a result of a reduction of the school staff, an increase in the size of classes, and other economies effected during the period. It was especially interesting, in view of the fact that a new salary schedule went into effect during the second semester. As a result of these changes, the senior high school was operated on a basis of 24 pupils to the teacher, the junior high school with 31 pupils to the teacher, and the elementary schools with 36 pupils to the teacher.

The program was operated with a per-capita cost of 148.51 in the senior high school, as compared with 156.08 for the previous year, making a decrease of 7.57; in the junior high school there was a cost of 99.52, as compared with 94.73 the previous year, making an increase of 4.79; in the elementary schools there was a cost of 71.64, as compared with the previous year, making a decrease of 1.93. The entire school system was operated with a per-capita cost of 89.90, as compared with 90.78 for the last year, making a decrease of .88.

COST OF OPERATING NEW YORK CITY SCHOOLS

In 1929, New York City spent \$141.65 for the instruction of each of the more than 1,200,000 pupils enrolled in its schools, according to a recent report of Mr. F. D. Chambers, auditor of the board of education. The expenditure of the school system last year was \$171,036,363.

The largest educational outlay of the city was for annual and recurring expenditures, and it was

this classification which gave the best view of the cost of maintaining the schools for the large army of children. The annual and recurring disbursements amounted in 1929 to \$131,504,930, of which the largest share, \$120,076,825, went for salaries, and the remainder for other expenditures, including equipment and materials.

To the recurring expense was added a total of \$39,531,432, outlay for additions to the plants of the school system in buildings, sites, furniture, and supplies. Available money during the year, including corporate stock funds for plant additions, amounted to \$210,886,008, of which more than \$39,500,000 was earmarked balance at the end of 1929.

The largest single item in the annual expenditures was the salary item for teaching and supervisory staffs, which amounted to \$109,333,925. The outlay for other expenses for direct teaching brought the cost of instruction in the system to a total of \$113,048,429.

PER-CAPITA COST IN MARYLAND

"The cost of educating the average pupil in eight counties of Maryland for 1929 was \$104, while six counties spent less than \$86, per high school pupil," recently said Albert G. Cook, state superintendent. "One-half of the counties showed increases in cost, and the remainder decreases from 1928 to 1929.

"The salary cost per pupil in 1929, \$72.46, was 87 cents lower than for the preceding year. Since the average salary per teacher was slightly higher, this reduction was due to the increase in number of pupils per teacher.

"The average county spent \$6.35 per pupil for costs of instruction other than salaries in 1929, which was .40 less than the amount expended in 1928. The amount spent includes not only county expenditures, but also the appropriation of .98 by the state for books and materials for each pupil, and other funds available for the purpose in counties receiving the equalization fund.

"The average cost of heating and cleaning high-school buildings was \$7.12 per pupil, an increase of .16 over 1928. The amount expended per pupil

for repair and replacement of high-school buildings and equipment was \$3.14 in 1929, .10 less than in 1928.

"The amount expended for repairs usually fluctuates with the budget. If it is pared to the minimum, repairs must wait, even though it would be greater economy in the long run to keep the buildings and equipment in good condition. Counties which have many old buildings must expend more to keep them in repair than must be expended by counties which have been able to construct modern buildings in recent years.

"The expenditure per pupil belonging for auxiliary agencies, which is the term representing transportation, health, library, and other community activities of the county high schools, was \$6.93, an increase of \$1.39 per pupil over 1928. One of the chief items in the increase was the transportation of a greater number of high-school pupils and the abandonment in certain counties of charges formerly made for transportation of high-school pupils.

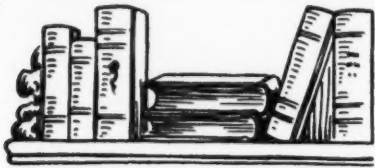
FINANCE AND TAXATION

♦ Supt. F. L. Mahannah, of Cedar Falls, Iowa, has submitted a budget of \$92,500, showing the per-capita cost is \$77.94, as against \$83.56 for last year. The average per-pupil cost in the state is \$90.

♦ Approximately 300,000 acres of public-school lands in Texas were placed on sale on September 1 in tracts ranging in size from 6¼ to 640 acres in 148 counties. This is the first sale of public-school lands since January, 1925, and is intended to fix the mineral status under a recent decision of the supreme court. All of the land is sold with the reservation of the minerals for the state, but the purchaser is authorized to act as agent for the state in leasing for oil and gas and to receive half of the royalties, rentals, and bonus in compensation for services and as a measure of damages to the soil.

♦ Hillsdale, Mich. The school board has adopted a budget of \$113,000 for the next year.

♦ Bellefontaine, Ohio. The school board has adopted a budget for the school year 1930-31,

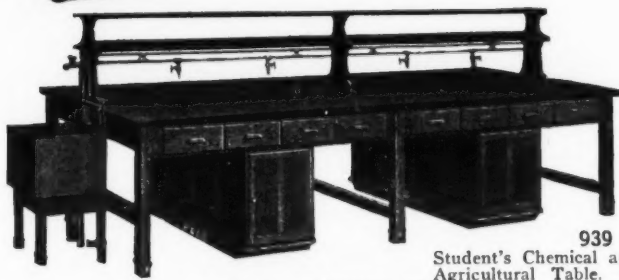


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amounting to \$123,709, which is a reduction of \$1,600 from that of last year.

♦ Tiffin, Ohio. The school board has adopted a budget of \$195,614 for 1931, which is an increase of \$20,000 over that of last year.

♦ Owosso, Mich. The school board has adopted a budget of \$328,972 for the next school year. Of this amount, \$231,039 will be raised by taxation.

♦ The county board of Somerset county, Md., has adopted a budget of \$128,638 for the next year. Of this amount, \$31,000 will be required for the construction of new buildings. The instructional service will require \$171,595, of which the state pays \$103,081.

♦ Ashtabula, Ohio. The school board has approved a budget of \$415,592 for the school year 1931, which is a decrease of \$2,000 from that of 1930.

♦ Euclid, Ohio. The school board has adopted a budget of \$463,100 for the next year, of which \$259,089 will be used for operating expenses, and the remainder for debt purposes.

♦ Akron, Ohio. The board of education has decided to ask the voters for approval of a proposed school-bond issue of \$750,000.

♦ St. Landry, La. The school board of St. Landry Parish has adopted a budget of \$371,455 for the school year 1930-31. The largest item in the budget is \$220,000 which goes to pay the salaries of teachers.

♦ Waukegan, Ill. The school board has appropriated \$400,000 for general school expenses and \$160,000 for the building fund.

♦ The school board of Mason City, Iowa, has adopted a budget of \$412,400 for the next year, which is a decrease of \$8,285 from that of last year. The new budget provides \$367,400 for the general fund, and \$45,690 for the building fund.

♦ Newton, Iowa. The school board has adopted a budget of \$206,819 for the school year 1930-31, which is \$2,000 less than that of last year. The general fund amounts to \$177,459, as compared with \$183,408 last year. The schoolhouse fund amounts to \$44,992, as compared with \$42,401 last year.

♦ Fostoria, Ohio. The school board has adopted a budget of \$200,161, which is an increase of \$8,000 over that of last year. The increase will be used to retire the bonded indebtedness.

♦ West Babylon, N. Y. The school board has adopted a budget of \$53,240 for the school year 1930-31, which is \$28,795 greater than that of last year. The increase is due to the construction of a new school.

♦ LaSalle, Ill. The school board has adopted a budget for the year 1930-31, calling for an appropriation of \$132,204, which is \$3,182 higher than that of the 1929-30 term. Of the total amount, \$90,000 will be devoted to educational purposes, and \$35,000 to building purposes. The budget provides \$2,000 for additional teachers' salaries, and \$2,000 more for the retirement of bonds.

♦ Philadelphia, Pa. The school board recently authorized a temporary loan of \$500,000 for the payment of school expenses. The loan which bears interest at the rate of four per cent per annum, is payable in two years' time.

♦ Seymour, Ind. The school board has adopted a policy of economy for the next school year. The budget and tax levy for 1931 will be the same as for 1930, the budget providing for a total of \$122,000, with a levy of \$1.25.

♦ Beardstown, Ill. A radical retrenchment program has been introduced in the schools in order to keep the school expenses within the limits of the available income. The retrenchment program became necessary when the voters failed to approve an additional tax levy for school purposes.

♦ State aid to the county schools of Florida has increased nearly 800 per cent during the past five years, according to a recent statement of Mr. W. S. Cawthorn, state superintendent of public instruction.

During the twelve months ending with June, 1930, the sum of \$4,022,918 was distributed as against \$566,773, for the year ending June, 1925. During 1925, the school funds were raised entirely from a one-mill tax and interest from school funds. In 1930, the county schools get money from both of these sources, as well as from a gasoline tax.

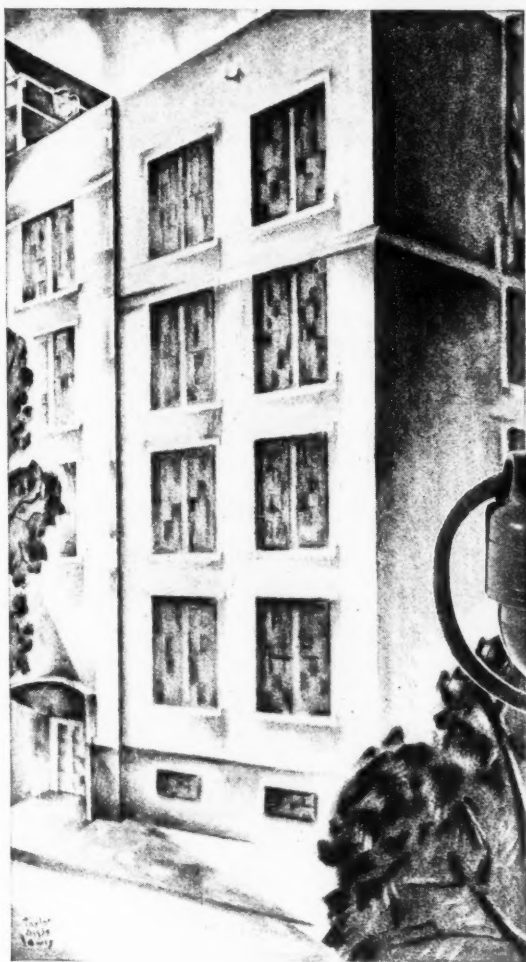
♦ A tax of \$2,015,947 is now available for new school buildings in Scranton, Pa. The money was derived from the sale of a school-bond issue of \$2,000,000, at a premium of \$10,540, plus \$5,000 in interest.

♦ Fort Dodge, Iowa. The school board has adopted a budget of \$437,892 for the operation of the schools during the school year 1930-31. Taxation will provide all but \$40,000 of the funds required for the year. The largest item in the budget is \$279,100 for salaries of teachers, clerks, and janitors.

♦ Akron, Ohio. The action of Thomas W. Gosling, superintendent of schools, in recommending to the board of education, a reduction of \$43,000 in the 1930-31 school fund has received the approval and commendation of the administrative officials of the local government. Because of the economy which Dr. Gosling has made possible, the rate of taxation to be collected next year will be kept at 28.3 mills, the same as last year. This means that Dr. Gosling, speaking for the school officials, is ready to face a period of financial shortage, seeking even the smallest economies, at a time when the drain upon the public purse is severe. The 1931 school budget, as adopted, calls for an expenditure of \$5,655,385, or an increase of \$225,270 over the budget for the last year. The increase which is attributed to an increase in enrollment and to the opening of new schools, will be provided for in the tax duplicate income and the contingent fund.

♦ Mr. Ernest Withall, business manager of the board of education of Chicago, Ill., recently issued a report on a survey of the destruction of school property, showing that 103,647 windows were broken during the past four years.

The survey revealed that 22,124 panes of glass were broken in 1926, 27,432 in 1927, 26,334 in 1928, and 27,757 in 1929, an increase of 5,633 panes over 1926, or an annual average of 26,000 broken panes. It is estimated that it costs between \$150,000 and \$200,000 annually to keep the windows of the schools in repair.



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THE reputation for QUALITY which Strowger P-A-X has gained among users of interior telephone equipment is based on very definite, tangible facts.

The apparatus of which Strowger P-A-X is constructed has been designed and engineered to meet the needs of telephone engineers and telephone operating organizations of international standing. Every P-A-X placed in service is, in point of quality and workmanship, material and design, identical with the automatic telephone equipment used for public service the world over—designed by the same staff, and made to the same exacting standards and subjected to the same critical inspections and exhaustive tests.

Long manufacturing experience is another item of importance. Automatic telephone equipment cannot be produced by the mere assembly of men, tools and materials. Time alone has been able to create Strowger technique and perfect the Strowger organization.

In selecting Strowger P-A-X for school use you have the assurance of its success in more than 2,000 installations in all parts of the country. The users of this equipment know it through years of experience with it, to be capable of rendering trouble-free, economical, accurate and convenient service.

We shall gladly make a survey of any school project calling for interior telephone equipment and recommend accordingly. Bulletin 1026 describes available types. Write for your copy.

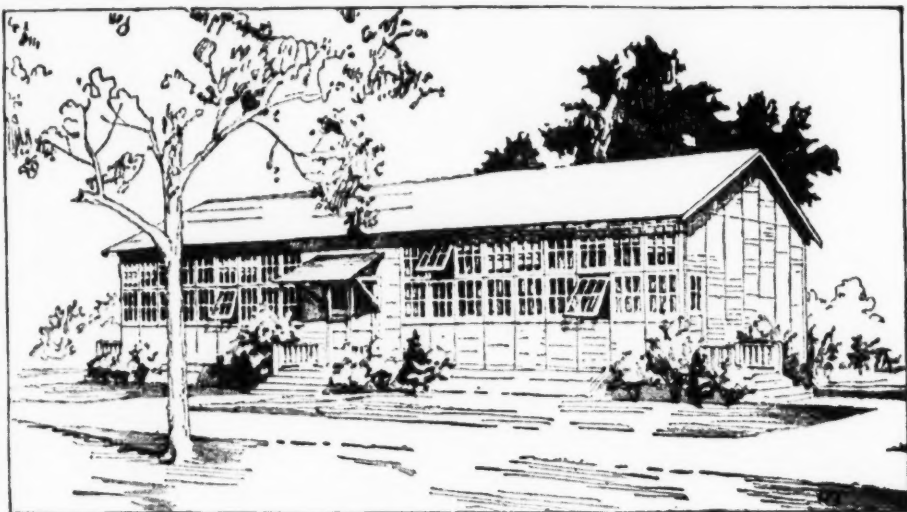
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Typical Two-Room School

Stronger, Airier, Insulated Buildings for Every School Housing Need

Circle A Schools and Gymnasiums provide attractive quarters for any size of student body—at a reasonable cost and in a very short time. For instance: 4 men erect the one-room school in five days. Other buildings "go up" correspondingly as fast. Circle A walls are insulated—four layers thick. They keep out heat, cold, and noise. Circle A Buildings are reinforced at every three feet and at all four corners. They are truly more rigid than most frame buildings. And, last but very important—Circle A Buildings are handsome substantial structures that can stand with pride in the most expensive company. Send for interesting details. No obligation.



Typical Gymnasium

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CIRCLE A BUILDINGS

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Also manufacturers of Circle A Sectional Partitions, Folding Partitions, Rolling Partitions, Kitchen Units, Portable and Permanent Steel Grandstands, Portable Wood Bleachers.



♦ DON C. BLISS, president of the State Teachers College at Trenton, N. J., and a former school superintendent, has announced his retirement from school work. During his long term as president, Mr. Bliss has made the Trenton Teachers' College one of the best in the country. Under his leadership, the college has maintained the standard that no certificate be granted to any teacher until success has been demonstrated by two years' teaching in a responsible position.

♦ MR. GLENN D. KING, superintendent of schools of Garfield Heights, Ohio, who was recently dismissed by the school board, has been ordered reinstated for the full period of his three-year contract, under a decision of the common pleas court. Mr. King brought suit against the school board and Nelson Campbell, principal of the high school, who succeeded him.

♦ DR. CHARLES EVANS has announced his candidacy for the office of state superintendent of schools of Oklahoma. Dr. Evans is a former school superintendent and has a wide acquaintance in the school field.

♦ MR. F. W. MONA, of Mt. Ayr, Iowa, has been elected superintendent of schools at Lyons.

♦ MR. O. D. CLAYTON, of Shelborn, Ind., has been elected superintendent of schools at Nashville, Ind., to succeed W. C. Goble.

♦ MR. T. W. SHEEHAN, of Peabody, Mass., has been elected superintendent of schools at Beverly, to succeed A. W. Robinson.

♦ MR. R. R. MORROW, formerly principal of the high school, has been elected superintendent of schools at Florence, Colo., to succeed the late J. P. Eskridge. Mr. O. A. Frakes has been elected to succeed Mr. Morrow as principal of the high school.

♦ MR. R. B. IRONS, of Winona, Minn., has been elected superintendent of schools at Mason City, Iowa, to succeed F. T. Vasey.

♦ MR. T. H. DECOUDRES has been elected superintendent of schools at Johnston, R. I.

♦ MR. ROBERT D. BALDWIN has resigned as president of the State Teachers' College at Stevens Point, Wis. Mr. Baldwin who had headed the College for four years, came from Cornell University where he had obtained his doctor's degree.

♦ A new three-year contract has been offered SUPT. FRANK CODY, by the Detroit board of education. The salary consideration was \$18,000, with annual increase of \$1,000, bringing the salary to \$21,000 in 1933.

♦ SUPT. CALVIN V. ERDLY, of Hollidaysburg, Pa., has been reelected for a four-year term.

♦ MR. SAMUEL ENGLE BURR, of Lynn, Mass., has gone to Glendale, Ohio, where he has assumed the superintendency of the city schools.

♦ MR. J. C. MITCHELL, of Holdrege, Nebr., has been elected superintendent of schools at McCook.

♦ MR. CHARLES A. STRONG, of Fargo, N. Dak., has been elected superintendent of schools at Heaton.

♦ MR. L. C. CAMPBELL, of West Baden, Ind., has been elected superintendent of schools at Oakland City.

♦ MR. L. P. STONEBRAKER, superintendent of schools at Struthers, Ohio, died at a hospital on July 30, at the age of 41 years.

♦ SUPT. GALE SMITH, of Rensselaer, Ind., has been reelected for the next school year.

♦ MR. W. E. COTTLE, of South Hamilton, Mass., has been elected superintendent of schools at Rockport.

♦ MR. M. H. THOMAS, formerly assistant superintendent of schools of Harrisburg, Pa., has been elected superintendent for a four-year term.

♦ SUPT. WESLEY B. BEADLE, of East Grand Rapids, Mich., has entered upon his eighth consecutive year as head of the school system.

♦ MR. WILLIAM IRWIN has been elected superintendent of schools at Higginsport, Ohio.

♦ MR. D. R. BAKER has been reelected as head of the schools at Hamilton, Ohio.

♦ MR. RALPH MCCLURE has been elected superintendent of schools at Marshall, Ohio, to succeed Mr. Vance.

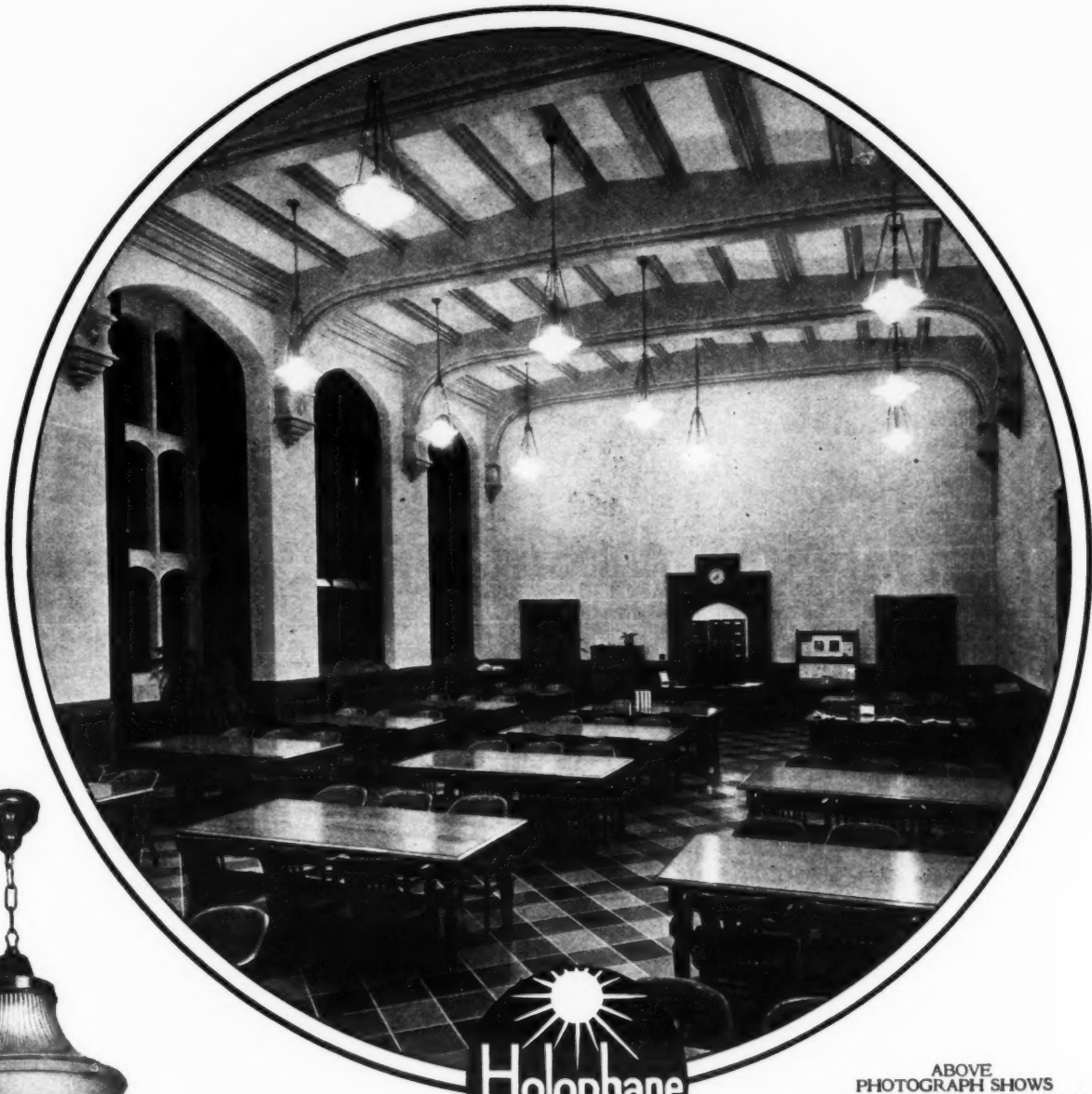
♦ Thirty school officials and newspapermen of Indianapolis, Ind., recently attended a luncheon at the Hotel Lincoln, in honor of PAUL C. STETSON, who has assumed the position of superintendent of schools. Among those in attendance were Mr. A. B. GOOD, business director of the schools; Mr. H. FRANK OSLER, superintendent of buildings; and Mr. F. L. REISSNER, secretary of the school board.

♦ MR. L. H. LAMB, who was formerly principal of the high school at Flint, Mich., has assumed the office of superintendent of schools, to succeed C. V. Courter, who resigned. Mr. Lamb holds degrees given by Stout Institute and the University of Michigan and completed his postgraduate work at the University of Iowa.

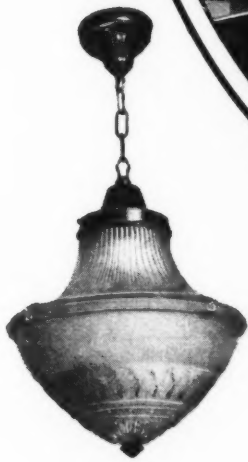
♦ MR. F. E. NEAL, superintendent of schools at Higginsport, Ohio, died on July 26 at Georgetown, after a brief illness. Mr. Neal, who was 33 years of age, had been head of the school system of Higginsport for a number of years.

♦ DR. HENRY SUZZALLO has assumed his duties as president of the Carnegie Foundation for the Advancement of Teaching. He succeeds Dr. Henry S. Pritchett, who resigned on June 18. Dr. Suzzallo

(Concluded on Page 94)



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PHOTOGRAPH SHOWS
THE LIGHTING RESULT



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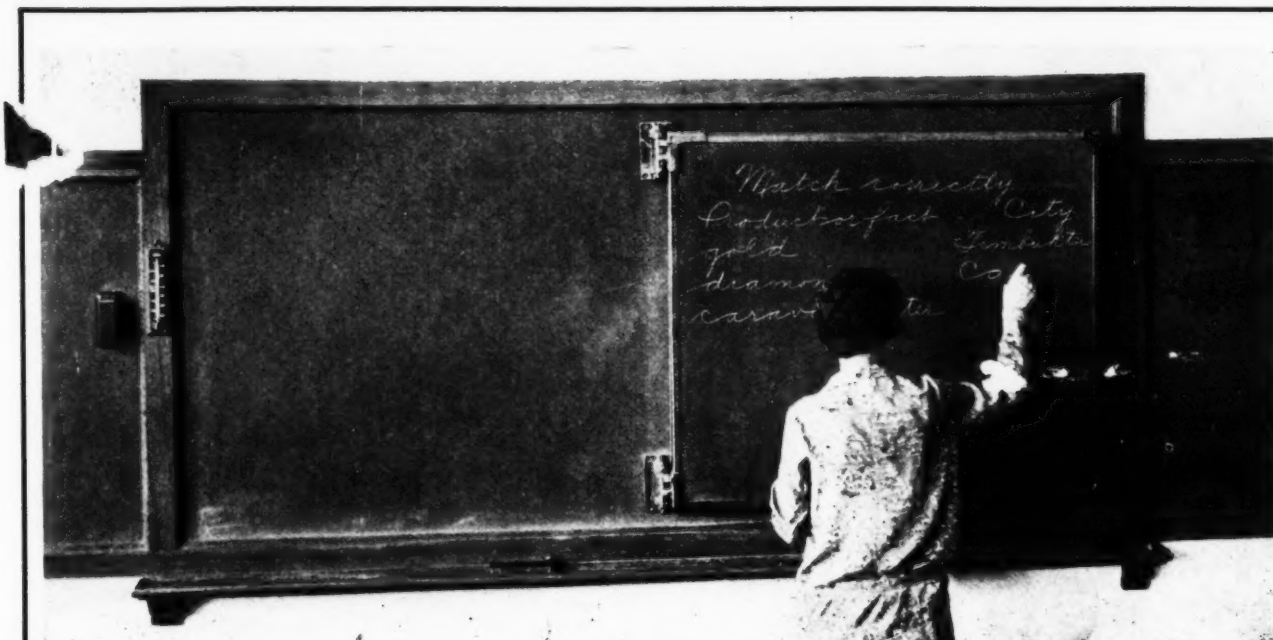
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**Plan
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Now...**

By Conserving Your Strength this Winter

Remember how you felt last spring when school was out? You were ready for vacation . . . and rest . . . partially because daily writing and rewriting on a blackboard that possibly is too high or too low for you was injurious to your health and an unnecessary strain. The Alternator pictured is a patented teacher's blackboard with eight huge leaves of slate. This novel blackboard book may be lowered or raised to suit the

teacher's height. It can be locked before examinations or when you want to "flash" work on your students. It can be used for records to be kept over a period of time. It is ideal for many uses such as the problem project system . . . the drawing lesson . . . the music lesson.

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KANSAS CITY, MISSOURI

is also head of the National Advisory Committee on Education.

♦ MR. E. J. SHEA has been elected as principal of the Brooklyn high school at Brooklyn, Wis.

♦ SUPT. F. E. CONVERSE, of Beloit, Wis., has been reelected for his 34th yearly term.

♦ MR. G. E. CARPENTER, of Houghton Lake, Mich., has been elected superintendent of the consolidated school at Roscommon.

♦ MR. C. E. OXLEY, of New Lexington, Ohio, has been elected superintendent of schools at Belle Center. Mr. Oxley succeeds H. S. Carroll, who has gone to Granville.

♦ DR. WILLIAM H. MARTIN, principal of the Troup Junior High School at New Haven, Conn., has been elected assistant superintendent of schools at Mount Vernon, N. Y.

♦ MR. WADE WOLFE has been elected superintendent of schools at Brookfield, Ohio.

♦ MR. G. C. WEST, of South Amherst, Ohio, has accepted the superintendency at Ridgeville.

♦ MR. HALE PEARCE, of Hillsdale, Mich., has been elected superintendent of schools at Peck.

♦ MR. R. E. COPELAND, of Williamsport, Ohio, has been elected superintendent of schools at Waldo.

♦ MR. H. C. NONIMAKER has been elected superintendent of schools at LaFayette, Ohio, to succeed W. G. Mustard.

♦ MR. T. J. EVERHART, of Versailles, Ohio, has been elected superintendent of schools at Ada, to succeed C. C. Crawford.

♦ MR. D. F. DICKERSON, of Clinton, Iowa, has been elected superintendent of schools at Winona, Minn.

♦ MR. H. S. CARROLL, of West Liberty, Iowa, has been elected superintendent of schools at Granville, to succeed A. D. St. Clair.

♦ MR. H. R. BROWN, of St. Cloud, Minn., has been elected superintendent of schools at Virginia.

♦ MR. H. J. BESTUL, of Spencer, S. Dak., has been elected superintendent of schools at Volga, to succeed E. J. Erickson.

♦ F. S. HYER, for ten years president of the State Teachers' College, Whitewater, Wis., has been appointed to the presidency of the Teachers' College, at Stevens Point, Wis.

♦ MR. DAVID WATSON, of Batesville, Ohio, has been elected superintendent of schools at Freeport.

♦ MR. H. C. MCKINLEY, of Bellefontaine, Ohio, has been elected superintendent of schools at St. Paris. Mr. F. M. HENRY has been elected principal of the high school at Bellefontaine, to succeed Mr. McKinley.

♦ SUPT. G. A. SWIFT, of Blue Rapids, Kans., has been reelected after a service of nine consecutive years in the schools.

♦ MR. CHARLES VANCE, of Marshall, Ohio, has accepted a position in the Columbus city schools.

♦ MR. L. D. HENDERSON, formerly commissioner of education in Alaska, has been elected district superintendent of schools at Burlingame, Calif.

♦ MR. PAUL MOTTOR has been elected principal of the schools at McGuffey, Ohio.

♦ MR. R. R. MORROW has been elected superintendent of schools at Florence, Colo.

♦ MR. H. M. CARTER has been elected superintendent of schools at Rupert, Idaho.

♦ DR. RUSSELL R. BROWN has been elected superintendent of schools at Trinidad, Colo., succeeding Dr. Gilbert S. Willey.

♦ MR. S. L. PETERSON has been elected superintendent of schools at Anchorage, Alaska.

♦ MR. WILLIAM R. BRUCE has been elected superintendent of schools at Park Falls, Wis.

♦ MR. GAIL PATTON, of Sparta, Ohio, has been elected superintendent of schools at Hyatts. MR. R. E. PARRETT, of Sedalia, succeeds Mr. Patton at Sparta.

♦ SUPT. J. H. BEVERIDGE, of Omaha, Nebr., has been reelected for a new three-year term. Mr. Beveridge has completed thirteen years of service as head of the local school system. During this period, the school board has completed the erection of three high schools and an addition to another. Plans are being completed for a \$25,000 addition to a fifth high school. Eleven new elementary schools have been completed during this time.

♦ MR. V. L. LANGFORD, of Charleston, Ill., has been elected as principal of the high school, to succeed U. B. Jeffries. Mr. Langford was formerly instructor of industrial arts in the Eastern Illinois State Teachers' College at Charleston.

♦ MR. JOHN A. TRUE, of McCook, Nebr., has been elected superintendent of schools at Council Bluffs, Iowa, to succeed Theodore Saam.

♦ MR. W. H. GRAYUM, formerly superintendent of schools at Puyallup, Wash., has accepted a position with the Charles E. Merrill Company of New York, as western representative for the firm.

♦ MR. G. D. WIGHT, of Corona, Calif., has entered upon his thirteenth year as superintendent of schools.

♦ SUPT. D. E. WIEDMAN, of Bellingham, Wash., has been reelected for a three-year term, at a salary of \$5,000.

♦ MR. W. D. WILKERSON, of Reagan, Tex., has been elected superintendent of schools at Calvert.

♦ MR. C. A. PEASE, of Buffalo Center, Iowa, has been elected superintendent of schools at Clear Lake.

♦ MR. E. L. HARMS, of Wellington, Kans., has been elected principal of the high school at Eldorado.

♦ SUPT. E. D. DENISON, of Lake Geneva, Wis., has been reelected for the next school year.

♦ MR. HOMER M. DAVIS has been elected superintendent of schools at Okanogan, Wash. He succeeds M. Brinkerhoff.

WEATHER STRIPPING SAVES \$1500 A MONTH

By James Marsdale

Saved \$1500 a month in the cost of fuel.

How would you like to achieve such an economy in your building? Never mind answering; the reply is obvious. There is no custodian who would not gloat over such an achievement in economy—if it were possible.

It is possible; it was done by Director Salisbury of the Department of Public Welfare of the City of St. Louis. And this saving came to pass through such a simple process as installing weather strips.

Here is the story as gleaned from Mr. Frank Edelman, assistant to Mr. Salisbury.

"The central building of our city sanitarium is 60 years old and the wings of the east and west sides are 20 years old—naturally resulting in a structure that presents a problem of keeping in the heat and keeping out the cold," said Mr. Edelman.

"That problem existed until we finally decided to equip with weatherstrips.

"After some investigation we chose Athey Cloth Lined Metal Weatherstrips. It was not inconvenient to equip, as patients were moved temporarily when their particular rooms were being worked on. The job was soon done and the economy began."

"Do you know definitely how much has resulted in the way of saving?" the interviewer asked.

"Yes, we know that we discontinued the use of one 350 H.P. boiler immediately and have since saved \$1500 a month in the cost of fuel," said Mr. Edelman.

"And that is not guesswork. We have an accurate method of checking costs. But fuel was not our only saving. We have saved decidedly on the cost of blankets, cancelling an order for \$2,000 worth, and patients are contented, warm and happy."

"You found that the equipment was satisfactory during the famous 'old-fashioned winter' of 1928-29?" asked the reporter.

"Completely satisfactory," said Mr. Edelman.

"The end wings are heated by means of a large blower fan and heating coils, one wing being equipped with one fan, four heating coils and two tempering coils. Only in extreme cold weather was it necessary to turn on more than two of the heating coils in each wing. For the greater part of last winter two heating coils for each wing supplied sufficient heat, tempering coils were not needed, at all in moderately cold weather. When the thermometer is around 25 degrees F. exhaust steam supplies the necessary heat."

"Before the installation of weatherstripping we were constantly annoyed by complaints of insufficient heat although every heating and tempering coil was turned on to its fullest capacity, but since the weatherstripping has been installed there has never been a complaint of any kind. It might also interest you to know that since this equipment was installed over a year ago, we have never put in one service call. I deem this quite a remarkable thing considering that we had 3,000 inmates to contend with."

Mr. Edelman then pointed out that fresh air need not be cold air and that sufficient ventilation at proper temperature is maintained.

"Another thing, of particular importance in a hospital, is the fact that there is less dust and dirt as a result of our use of Athey equipment, and our janitorial expense has been greatly decreased."

This installation of Athey Cloth Lined Metal Weatherstrips cost the city \$13,133.00. But the managers of the hospital maintain that "investment" would be the better word. Dividends are found monthly via the fuel bin and supply department. Incidental rewards accrue through the warm satisfaction of patients and staff as frigid winds whirl around but not into this old building which found a new way to economize.

SOME ATHEY WEATHERSTRIPPED SCHOOLS

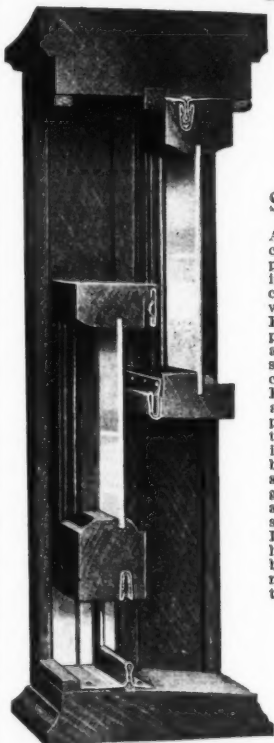
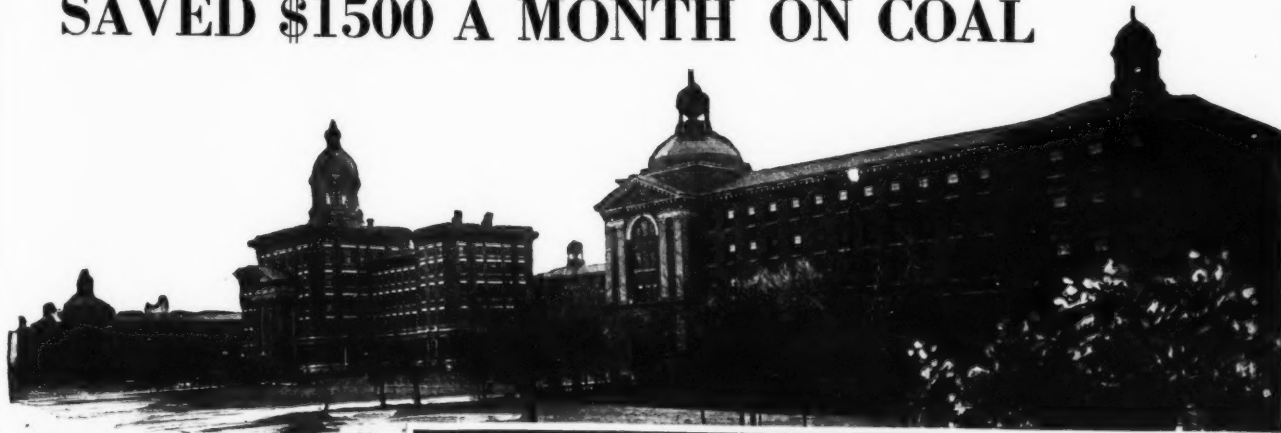
- Parma High School, Parma, Ohio.
- Vermilion High School, Ohio.
- School for Museum of Fine Arts, Boston, Mass.
- University of South Carolina.
- National Kindergarten College, Wilmette, Ill.
- St. Mary's High School, Royal Oak, Mich.
- Wm. Penn Charter School, Pa.
- Ohio State University.
- Union High School, Deming, Wash.
- South Euclid High School, Ohio.
- State Normal College, Cortland, N. Y.
- Haverling High School, Bath, N. Y.
- Saginaw High School, Saginaw, Mich.
- University of Illinois, Urbana, Ill.
- Woodrow Wilson School, Long Beach, Fern St. School, Hartford, Conn.
- Arlington School, Spokane, Wash.
- State Teachers College, Minot, N. Dak.
- Alameda High School, Alameda, Calif.

PREPARE FOR WINTER NOW!

Athey

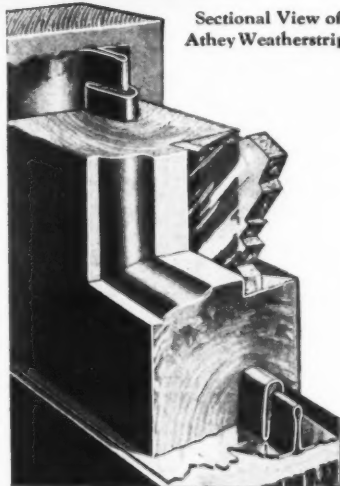
CLOTH-LINED METAL WEATHERSTRIPS

SAVED \$1500 A MONTH ON COAL



Athey Seal-Tite

An efficient caulking compound for filling cracks and crevices around window sills. Entirely waterproof, easy to apply, doesn't stick to kifs or caulking irons. Elastic — unaffected by temperature. Contains no creeping oils that bleed out, staining or gathering dust and dirt on the stone or brick. It is very adhesive and can be colored to match any material.



Sectional View of Athey Weatherstrip

OFFICE OF
DIRECTOR OF PUBLIC WELFARE
329 MUNICIPAL COURTS BLDG.

The Athey Company,
928 Chemical Building,
St. Louis, Mo.
Gentlemen:—

February 16, 1929.

You will perhaps be glad to know that through the weather-stripping job handled by your people at the City Sanitarium recently, we were able to discontinue the use of one 350 horse-power boiler, a saving to the City of about \$1500.00 a month in coal. We were also able to cancel an order for about \$2000.00 worth of blankets, which had been requisitioned for use during the present winter.

Feeling that this information would be of interest to you, we gladly submit it.

Yours very truly,

H. Salisbury
Director of Public Welfare.

No school executive can afford to pass up savings like this. Think of it—\$1500 a month on coal savings alone through the use of Athey cloth-lined metal weatherstrip. But that's only a small part of the savings. Consider what Athey weatherstrips do in eliminating drafts, preventing colds and epidemics in schools, in keeping out dust and dirt and decreasing janitor expense and ash-handling.

The Athey method is scientific, efficient, economical. It soon pays for itself as attested by hundreds of schools that have utilized this modern system.

Write for catalog and list of prominent schools that are Atheyized.

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It contains valuable information for schools, architects or engineers, desiring to save fuel, prevent drafts and increase comfort. Also send information on Athey Accordion Pleated Shades for Schools.

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City and State.....



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SHINE-ALL will preserve your floors and keep them attractive. Don't wait until it is too late. Write us to have a Maintenance Engineer show you without cost or obligation what SHINE-ALL will do and how it will SAVE YOU MONEY! SHINE-ALL is neutral, non-abrasive, and non-acid—that's why it is so safe for your floors. Remember, next year MAY BE TOO LATE!

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Before It's



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PERSONAL NEWS OF SCHOOL OFFICIALS

♦ Mr. Ed. J. FEHN has been elected president of the school board at Evansville, Ind. Rev. J. F. RAKE was reelected treasurer, and Mrs. NANCY HITCH secretary.

♦ Mr. G. W. RAUCH has been reelected as president of the school board of Marion, Ind. Mr. O. A. BRADFORD was reelected as treasurer, and Mr. A. A. BURRIER as secretary.

♦ The school board of Anderson, Ind., has reorganized for the year, with the election of Mrs. AUGUSTA D. MILLSPAUGH as president, Mr. LINFIELD MYERS as treasurer, and Mr. JOSEPH T. DAY as secretary.

♦ Mr. IRWIN T. CATHARINE has recently been appointed superintendent of school buildings at Philadelphia, Pa., to succeed John D. Cassell who retired on August 31. Mr. STANLEY YOCOM was appointed first assistant to the superintendent, and Mr. CHARLES G. CALHOUN, first assistant in charge of school construction work.

♦ The school board of Princeton, Ind., has reorganized for the year, with the election of Mr. HARVEY MILBURN as president, ESTELLA J. WALKER as secretary, and Mr. THOMAS B. NASH as treasurer.

♦ Mr. JOHN KERSEV, a former member of the school board at Hoboken, N. J., died at Jackson Heights, New York City, on July 31, at the age of 87.

♦ Mr. WM. M. COUNCELL, an instructor in the Shaw High School, East Cleveland, Ohio, has been elected business manager of the school board. Mr. Councell succeeds Charles A. Tilden, who had

acted as business director of the schools for the past ten years. The office is a new one created by the school board, to be under the direct supervision of the superintendent of schools.

♦ The school board of Logansport, Ind., has reorganized, with the election of Dr. J. H. BARNFIELD as president, Mr. J. C. TAYLOR as secretary, and Mr. CLAUDE ZOOK as treasurer.

♦ Mr. C. M. NILES has been reelected president of the school board at Benton Harbor, Mich.

♦ The school board of Alexandria, Ind., has reorganized, with the election of Mr. I. S. KELLY as president, Mr. G. E. SLONE as secretary, and Mr. ROBERT FRANKS as treasurer.

♦ The school board of Seymour, Ind., has reorganized for the year, with the election of Mr. D. A. BOLLINGER as president, Mr. C. E. LORRTZ as treasurer, and Mr. JOHN N. CONNER as secretary.

♦ The school board of East Grand Rapids, Mich., has reorganized for the school year, with the reelection of Dr. CHARLES A. BURBRIDGE as president. Mrs. EVELYN L. AVERY was reelected as a member of the board. During the past ten years the membership of the board has remained practically the same, with only one change in that time. During the decade, the school enrollment has trebled and the population has increased 250 per cent. A half-million-dollar school-building program was carried out during this time.

♦ The school board of Lockwood, Mo., has reorganized for the school year, with the election of Mr. J. K. PEER as president, and Mr. U. S. KERAN as treasurer.

♦ The school board at Pittsburg, Kans., has reorganized, with the reelection of Dr. C. M. GIBSON as president, Mr. E. D. AXTON as vice-president, Miss THELMA WERME as clerk, and Mr. JAMES FULTON as treasurer.

♦ Mr. HAROLD D. GREEN has resigned as a member of the school board of Paterson, N. J. Mr. James E. Torrey has been appointed to succeed Mr. Green.

♦ Mr. CHARLES JENNEY has been elected as a member of the school board of Belmont, Mass., succeeding Mr. Torrance Parker.

♦ Mr. ALFRED S. GRONEMEIER, of Mount Vernon, Ind., has entered upon his second term as a member of the school board.

♦ The school board of Corydon, Ind., has reorganized for the next year, with the reelection of Mr. N. R. DAVIDSON as president, Mr. H. T. FREDERICK as secretary, and Mr. P. L. DAVIS as treasurer.

♦ Dr. CHARLES W. MERRITT has been elected as president of the school board of St. Joseph, Mich., succeeding Mr. Fremont Evans. Mr. MATTHIAS WEBER was reelected as secretary of the board.

♦ The school board of Shadyside, Ohio, has reorganized, with the election of Dr. W. J. NESBITT as clerk.

♦ The school board of Huntingburg, Ind., has elected Dr. L. C. LUKEMEYER as president, and Mr. CECIL BLEMKER as secretary.

♦ The school board of Mackinaw, Mich., has reorganized, with the reelection of Mrs. H. R. STIMPSON as president, Mr. C. K. FULMER as secretary, and Mr. C. J. DIETZ as treasurer.

♦ Mr. E. E. ROLLINS has been elected president of the school board of Kankakee, Ill.

♦ Mr. SAMUEL T. CHESHIRE has been elected president of the school board of Huntington, N. Y.

♦ The school board of Franklin Square, N. Y., has reorganized, with the election of Mr. A. N. ANASTIER as president, Mr. W. B. BRYAN as clerk, and Mr. J. W. HAYER as treasurer.

♦ The school board of Columbia City, Ind., has reorganized, with the election of Mr. FRED YONTZ as treasurer, and Mr. A. S. NOWELS as secretary.

♦ The school board of Elwood, Ind., has reorganized, with the election of Dr. WAYNE DEAN as president, Mr. R. T. BOSTON as secretary, and Mr. CHARLES E. BARNES as treasurer.

"Burning daylight"



IT may now almost be said that man is "burning daylight." Darkness—feared by primeval man has today been completely conquered. The torch, the candle, the oil lamp, the gas burner, the electric bulb, the ordinary lighting globe, and now Celestialite have each marked successive stages in man's struggle

to conquer darkness. Another great stride forward has been taken in man's efforts to imitate the absolutely perfect light of the Sun.

Celestialite is made to transmit a light which is a very pleasing imitation of daylight.

Celestialite gives a soft but powerfully revealing light, pure white, and restful to the eyes. Under it your eyes see better, your mind and body both work more effectively because—perfect lighting stimulates both physical and mental activity.

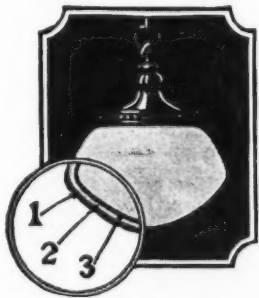
Many Universities Use It

Columbia, Princeton, The University of Pennsylvania and many other high grade schools and universities throughout the country have adopted Celestialite after investigating its merits. For further information mail the coupon.

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CELESTIALITE's Three Ways:

- [1] Of crystal clear transparency—for body and strength.
- [2] A layer of white glass—to diffuse the rays and soften the light.
- [3] A layer of blue glass—to whiten, clarify and perfect the light.

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Mail the coupon below for complete information and specifications and a sample of glass showing the three-layer construction of Celestialite.

MAIL THIS COUPON NOW
Gleason-Tiebout Glass Co. (Celestialite Division)
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Please send me free copy of your booklet, "Out of the Darkness," and fragment of Celestialite glass, showing three-layer construction.

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Position.....
Address.....

A. S. J. 9

JINGER

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Feralun is iron with an abrasive grit cast in the wearing surface. It prevents slipping and has no grooves to cause tripping accidents.

Besides its anti-slip qualities, FERALUN increases by years, the life of wood, marble, granite, slate, cement stairways;



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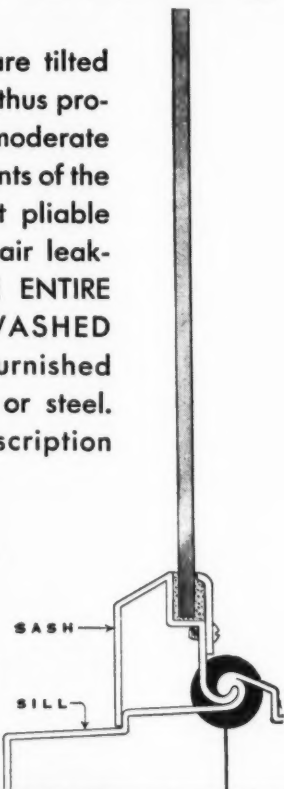
SEALAIR IS DRAFT PROOF Open or Closed

When open the sashes are tilted to deflect the air current, thus providing the interior with moderate ventilation. Closed, the points of the sash are pressed against pliable asbestos strips reducing air leakage to a minimum. THE ENTIRE WINDOW MAY BE WASHED FROM THE INSIDE. Furnished in heavy gauge bronze or steel. Send for complete description and F. S. details.

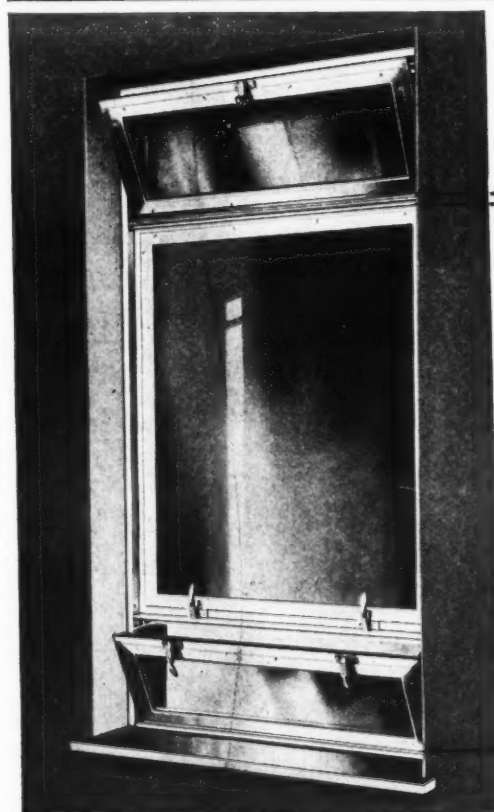
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Water-proof hinge
Patent applied for.



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The twenty-sixth W. & T. Chlorinator to be installed by the New York Board of Education during the past seven years is now in service on the DeWitt Clinton High School, a recently completed unit of the Board of Education's \$350,000.00 school program.

Surely a convincing argument in favor of equipping your school pool with a W. & T. Chlorinator.

School-Board News

TRAINING FOR SCHOOL-BOARD SERVICE

"School directors should go to a school of their own," said Edwin L. Hettinger, a member of the Reading, Pa., board of education. "They should, first of all, have instruction in business management, the construction of buildings, and the principles of education."

"How much does the average school director know when he is elected? The Reading school district is a big corporation. It spends \$3,000,000 a year. That's big business. Yet, a man is plumped into the midst of this bewildering thing, without knowing a bit about it. I don't have a thing to say against popular election. But, why shouldn't a man be taught something about his job after he is elected?"

In discussing the subject with the editor of the *SCHOOL BOARD JOURNAL*, he said: "I fully agree with your editorial in the July issue—'Shall School-Board Executives be Subjected to Special Training?' The answer is yes, by all means."

"Very often, secretaries have a meager business experience, having been elected for one reason. They are 'good fellows.' Business managers, purchasing agents, and executive secretaries of a board of education should be versed in accounting, school system, state codes, and should possess more than reasonable business judgment."

"I still believe in going you folks one step farther. I firmly believe in a school for school directors. I further believe that the school director should be selected by the county judges, and not elected by a popular vote, simply because they are 'good fellows.'"

BOARDS OF EDUCATION

♦ The board of education of New York City has awarded contracts for 89,000 tons of coal, at \$617,-

694 for Manhattan and Bronx, and 111,000 tons, at \$832,408 for Brooklyn, Queens, and Richmond boroughs. Approximately \$60,000 was saved by readvertising for bids. Mr. Patrick Jones, superintendent of supplies for the board, pointed out that these and other coal contracts reduced the average cost of coal to \$7.25 per ton. A total of 62 coal dealers were invited to bid on the contracts, but only 7 submitted bids.

♦ Los Angeles, Calif. At a recent meeting of the legislative committee, suggestions were received relative to the changing of the method by which members of the school board are elected. The federated civic organizations, headed by Mr. F. J. Spring, suggested that, instead of electing seven members at large as at present, the method used in selecting council members be used, with fifteen board members elected for the fifteen districts. A request was made for a special charter amendment, to be placed on the November ballot. It was pointed out that, under the new plan of district representatives, the outlying residential areas would not suffer from a lack of school buildings.

♦ The board of education of Monroe, Wis., has elected the following officers: President, Mr. F. J. Bolender; secretary, Mr. M. E. Baltzer; treasurer, Mr. C. A. Roderick; director, Mr. Robert Rote.

♦ East Cleveland, Ohio. The school board has discontinued the office of director of schools and has created the office of business manager, under the direction of the educational department. The new official will have charge of the financial and property details of the schools, and his salary will be fixed by the board of education.

♦ Boards of education in Ohio may lease school busses and may include a clause in the contract

that such busses may be purchased after the lease has expired. However, school boards may not buy on the installment plan, under a ruling of Attorney General Gilbert Bettman. The ruling was given to answer a legal question where several school boards in rural districts contemplated the purchase or lease of school busses to be operated under their own direction.

♦ Under an opinion of the attorney general of Wisconsin, real estate acquired by a local board of vocational education in the name of the city may be conveyed by the city.

The opinion was given to Mr. George P. Hambrecht, state director of vocational education, to adjust a situation where a public-school building had been transferred to a local vocational board in the state. The vocational board, which had no further need of certain lots originally planned for the site of a vocational school, had desired to dispose of the lots by sale. The opinion held that the title of the lots is vested in the city, and despite the fact that a vocational board has control of the schools it establishes, conveyance of the lots must be made by the mayor and clerk of the city under the authority given them by the common-school law.

♦ A rehearing of the case in which San Francisco teachers won the right to collect nearly \$500,000 in back salaries has been denied by the District Court of Appeal. The board of education which had asked for a review and annulment of the previous decision announced that the case would be carried to the supreme court of the state.

♦ Hawthorne, Calif. The school board has adopted rules and regulations governing the employment of teachers in the schools and a salary schedule covering ten months of service. The lowest salary for teachers is \$7 per day and that of the teacher-principal, the highest, is \$9.88 per day. The board will make no payment for time lost except for stated list of school holidays.

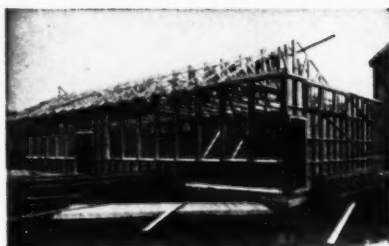
The board has reserved the following rights:

1. To change the dates of service. Unless otherwise declared, the school will begin Sept. 8, 1930 and close on June 26, 1931.

2. To terminate any contract after 170 days of actual teaching on account of unavailability of funds.

HARRIS UNIT-BUILT SCHOOLS

Safe — Modern — Economical



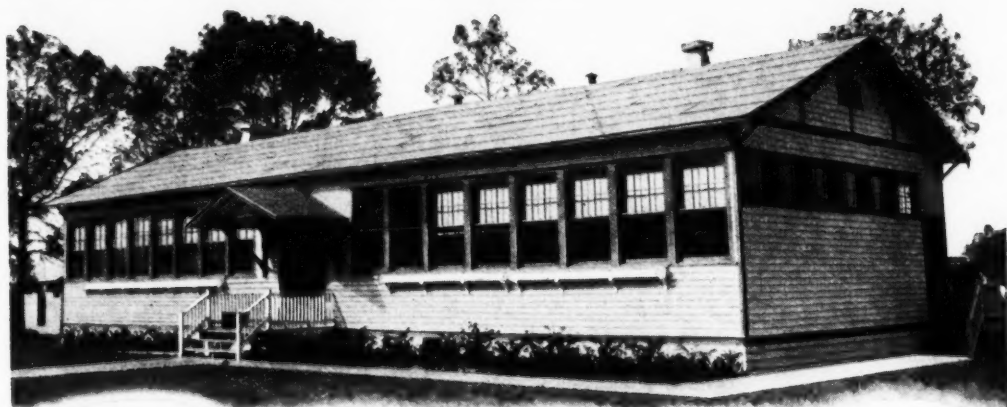
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America's Standard in School Housing

Designed and manufactured by America's largest producers of sectional buildings, an organization foremost in the Building and building material industry for over 35 years. Embracing all the requirements of a modern building—correct light, perfect ventilation, sanitation, and safe construction are all an integral part of every Harris School, yet they are low in cost. Our Standard Designs accommodate 40 to 400 pupils and offer the most satisfactory solution of your housing problem in the most economical way.

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School has opened! Do you find a larger attendance than you had planned on? If you are crowded for space and find that your present building will not take care of your enrollment, you will have to provide additional classroom space immediately. We can give you immediate shipment on any number of classrooms that you desire. Call, write or wire us your requirements, telling us the number of pupils you have to accommodate, and we will immediately send you quotations and plans for a building to suit your requirements. Our central location enables us to give prompt shipment to any part of the country. Ask for our new school building catalog, illustrating the many types of schools we manufacture, together with our complete specifications.

HARRIS BROTHERS CO.
NEW YORK 1349-1525 West 35th Street, CHICAGO, ILL. DETROIT

3. To declare vacations without pay. In declaring holidays because of any epidemic, employees will not be paid for the time school is closed.

4. To change the assignment of duties of certificated employees whenever the education needs of the district require.

5. No payment shall be made for absence on account of sickness or quarantine or for the loss of time on account of death or illness of relatives.

♦ The annual report of Supt. R. G. Jones, of Cleveland, Ohio, shows a decrease of 1,662 pupils in grades one to six for June, 1930, as compared with June, 1929. A large part of the decrease has been attributed to an increase in the special classes. The actual decrease was 925, or 1.15 per cent. The total enrollment for June, 1930 was 144,689, or 1,714 more than the enrollment of June, 1929.

♦ Wilmington, Ohio. The school board has recently remodeled the rooms used by the superintendent of schools and the school clerk. One extra room was provided for the use of the clerk and for a stock room for school supplies.

♦ Decatur, Ill. After a careful study of the situation, the school board has taken action to move and reequip the high-school cafeteria. The new and improved cafeteria will occupy the space formerly used by the manual-training department. While the cost of the work is estimated at \$4,400, it was believed the increased patronage would more than pay for the cost of the improvements.

♦ Detroit, Mich. The school board has approved a recommendation of Mr. Charles Williams, a member, that the board refuse to approve a plan of using college students in place of policemen at traffic corners. The plan was proposed by Dr. Burt Shurley, who estimated that a saving of \$25,000 would be effected.

♦ Glencoe, Ill. The school board has ruled that children who will be 6 years old before February 1, or who have a mental age of 6 on September 1, are eligible for entrance into the first grade.

♦ Supt. F. T. Vasey, of Springfield, Ill., has announced a new high-school daily schedule, which provides for the dismissal of classes at four o'clock each day, rather than at 3:10 as was formerly the custom. Under the new schedule, teachers will have five classes each day, in place of four classes.

♦ Cleveland, Ohio. The school board has pro-

posed a rule, prohibiting the employment of a husband and wife at the same time in the schools. A checking of the list of employees revealed that sixty couples are at present on the school payroll.

♦ Six superintendents in county school districts of Ohio are hopeful of retaining their positions as a result of a court decision to grant an injunction restraining the school board of Garfield Heights from proceeding with its removal of Glenn D. King as superintendent. The positions of the six superintendents had been jeopardized by a ruling of the county prosecutor that recent legislative action made it unlawful for a village school district to have a superintendent, even though he was given a contract before the new school law went into effect. The court held that the contracts of the superintendents must be honored. Pay of the superintendents had been held up pending the decision of the court.

♦ East St. Louis, Ill. The school board has created the position of coal inspector, with the appointment of Mr. Joseph Weick, at a salary of \$155 per month. Equipment for fuel testing has been installed, at a cost of \$444, which will be used in connection with the testing of coal delivered at the various school buildings.

♦ South Bend, Ind. The enrollment in the schools has grown from 11,571 in 1919, to 19,457 in 1930, which is an increase of 7,886.

♦ Calvin, Okla. Two additional rural districts have recently been annexed to the school district, making the district the largest in area in the county. Two trucks have been provided to furnish transportation to the pupils in attendance.

♦ Calvin, Okla. The school board has recently adopted a policy of definite responsibility for the executive school officer, Superintendent Miller, who handles all the business details of the schools. The arrangement has worked out satisfactorily and has received the commendation of the school staff.

♦ The board of examiners of the New York City department of education has reorganized its committees for the coming school year, with the election of Mr. Joseph K. Van Denburg as chairman of the board, and Mr. Walter L. Hervey as head of the committee on salary credit for outside service of teacher. Mr. Henry Levy has been elected as

chairman of the two combined committees on promotion licenses and summer activities.

♦ Mr. Roy R. Roudebush, assistant state superintendent of education of Indiana, in a recent radio talk, called attention to measures of safety needed at the present time in connection with the operation and control of school busses. He pointed out that there is too much variety in the types of busses used. Overcrowding is another fault. He urged that rural communities see to it that proper accommodations are afforded for school children who are transported, not only by the operators, but also by the public. School busses should observe the railroad slogan, "Stop, Look, and Listen."

♦ A complete reorganization of the Alaska department of education has been effected with the moving of the executive offices from Seattle to Juneau. The removal of the offices was ordered following a visit of Dr. John W. Cooper, director of the U. S. Office of Education, who made a personal survey of the Alaska department. Mr. Jonathon Wagner, formerly director of the bureau has resigned, and the work is at present under the direction of Mr. C. W. Hawkesworth, acting director.

♦ District Supt. W. E. Grady, of New York City, has proposed the establishment of a rotary system of teachers' assignments through the grades, in order to avoid unduly heavy assignments on a few teachers of each school. Superintendent Grady warned against permitting teachers to remain too long in one grade, and urged that they be given a wide range of experience so that they may be helped in gaining promotions.

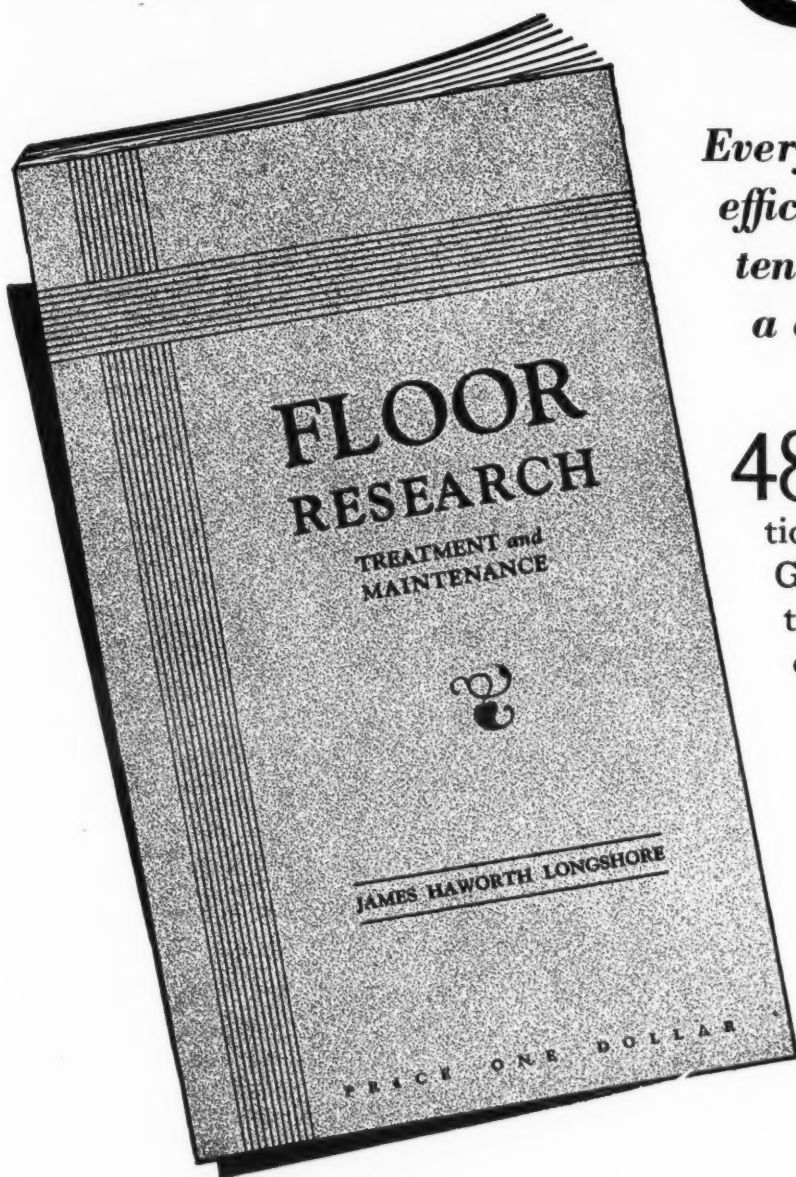
THE MOTION PICTURE AND THE SCHOOL

(Concluded from Page 100)

but we must never forget that when we cease to evolve we are through. There is nothing so constant as change. Those who contend that we have come a long, long way and accomplished much through verbal expression resemble the Irishman who fell from the top of a tall building, and as he passed the sixteenth story on the way down exclaimed, "Well, I'm all right so far!"

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TRADE MARK REG. U.S. PAT. OFF.
THE PERFECT FLOOR TREATMENT



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School-Building-Construction Economies

School-Board Business Administration

Article VI—Part 4

George F. Womrath, Minneapolis, Minnesota

16. What type of roof is most economical?

In deciding on a roof for a proposed new school building the cost and longevity of different types of roofs should be compared. The accompanying plan illustrates the various types of roof construction which are frequently employed in schoolhouse work.

A study of roofs should include the following important purposes of roofs as well as the troubles which commonly arise from the selection of improper roof design and roofing materials:

The first cost and the subsequent cost of upkeep.

easiest and least expensive to repair when damaged. It is the only type of roof for which the roofing will be guaranteed and bonded for 20 years by the manufacturers.

Any type of roof with ridges and gables and dormers is difficult to keep cleared of snow in winter. On account of the alternate thawing and freezing of snow, ice, and water in the fall and spring seasons, such roofs are subjected to great strains, often resulting in bad leaks and the need of constant repairs. These objections do not apply with equal force to roofs in southern climates; nor to flat roofs.

Sloping roofs covered with slate are deserving

kind of roof. A poor roof is an expensive investment from every standpoint.

17. What type of window frame and sash should be used?

The accompanying plate illustrates the various types of window construction commonly applied to schools and domestic buildings. The windows of the building should have special attention as to type, construction, and the choice of materials. The proper choice of a window not only affects the architectural design of a building, but is a factor in construction and equipment. It has a distinct relation to the temperature regulation of the classroom, the selection of shades, guards, window stripping, etc.

Carefully compare wood with steel window frames and sash. Also double-hung versus swiveled sash; and casement windows versus French windows. Competitive bids upon double-hung wood versus swiveled steel sash show the cost of both types of sash to be practically the same.

It is a debatable question whether or not steel window frames and sash increase the operating cost of a building. It is claimed that steel window frames and sash require the burning of more coal to keep a building warm than needs to be burned when wood frames and sash are used. This claim is based upon the theory that steel conducts large amounts of frost into and heat out of the building. This transfer goes on so rapidly in cold weather that frost may not infrequently be seen on the inside of the mullions of steel windows.

Can window shades and window guards be hung satisfactorily on steel sash? On swiveled sash?

The original cost of installation and subsequent cost of maintenance is unquestionably much higher to apply shades and guards to steel and swiveled sash than to double-hung wood sash.

When swiveled sash are open, the wind gets back of the shades and tears them loose. Sunshine cannot be excluded when swiveled sash are open. If no special provision is made to hold the shades against the window mullions when



A SLOPED SLATE ROOF THAT MAY BECOME DANGEROUS

The possibility of leaks due to unusual strains by reason of frost and snow.

The possibility of leaks in the valley joints, on the ridges and hips, and around dormer windows and flashings.

The waste of unnecessary attic space.

The dangers of shingles and tiles becoming loose and sliding off causing injuries to persons below.

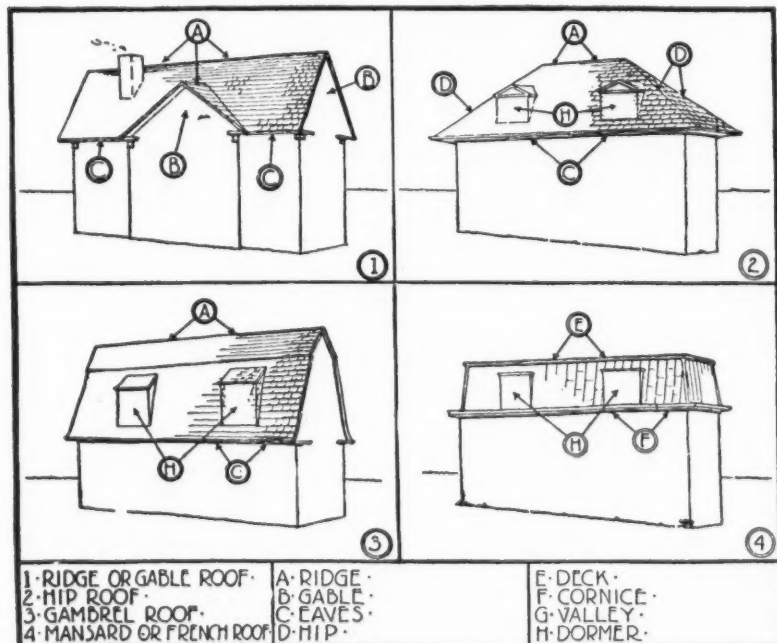
The danger of snow slides and falling icicles.

A flat roof, covered with a high-grade roofing material, properly laid, is the least expensive in original cost of any of the better types of roofs and is the most economical to maintain and the

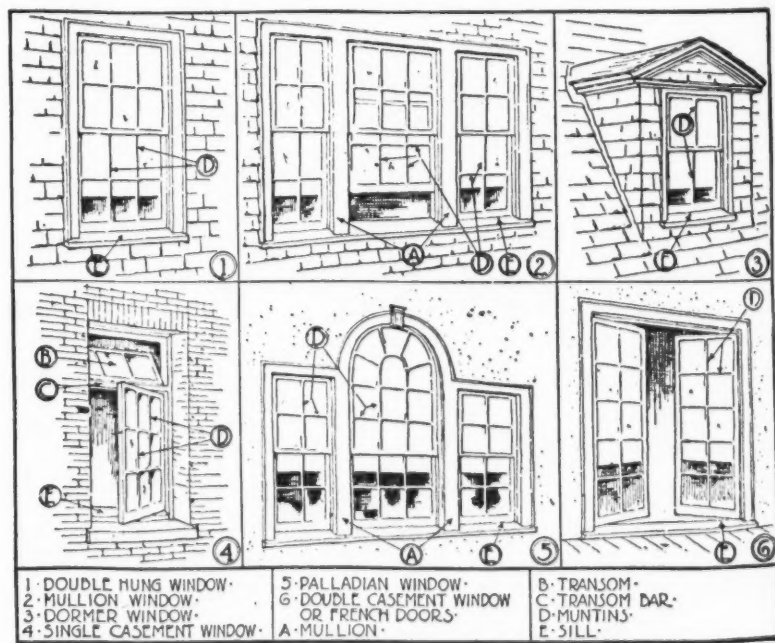
of special consideration. Unless the slate is applied with extreme care and caution, and roof provided with slide guards, pieces of slate that become detached, especially in windy weather, slide off and endanger the lives of people and school children who may be below. (See cut.)

Tile roofs are difficult to lay so that they will be perfectly weather tight and are difficult to insulate. Maintenance costs are not so much of a problem with this type of roofs as is the subsequent heating cost of the building.

A flat, 5-ply tar-and-gravel roof is comparatively inexpensive and very durable. It is difficult to give reasons in justification for any other



TYPES OF ROOF DESIGN NOT SUITED TO SCHOOLS



TYPES OF WINDOW DESIGNS AND CONSTRUCTIONS

Fairhurst School Wardrobes and Folding Partitions

Built under the Supervision of John T. Fairhurst,
who has specialized in this line for over 30 years

Manufactured by Park, Winton & True, 101 Park Avenue, New York

1930 marks the 75th anniversary of this organization,
which has been producing high grade mill work since
1855, at its factory at Addison, N. Y.

Fairhurst School Wardrobes

After designing, improving, and perfecting school wardrobes over a period of 30 years, Mr. John T. Fairhurst offers these wardrobes not as luxuries, but as economic necessities for modern schools.

MR. FAIRHURST is giving his personal attention to all wardrobe and partition jobs. Any of three different types of Operating Hardware may be applied to the doors of Fairhurst School Wardrobes. The individual requirements of each school determine which of the following types to use:

Single Operating—Each door is opened and closed independently of the other.

Dual Operating—It is necessary to handle only the right-hand door on each pair of doors. The left-hand door moves automatically when the right-hand door is moved.

are 2'-0" deep, the widths may vary. Blackboards and chalk rails with close fitting joints are furnished when required.

The aisles and interiors of the wardrobes are free from obstruction at all times whether the doors are open or closed. In the open position, the doors are entirely out of the way at the ends of each compartment. The doors pivot, there are no rollers or wheels, no tracks on the floor. The operation is simple, smooth and quiet.



This illustration of one of the Hewlett School wardrobes with the two end compartments open shows that the doors are entirely out of the way when open.

We are particularly anxious to tell you about the **Multiple Operating** hardware. It is of such ingenious design that 12 or 14 doors (if you should ever want that many) can be operated at one time with practically no more effort than it takes to move a pair of doors. Any one who is "mechanically-minded" will be intrigued at once by the simple and positive action of this rugged, troubleproof hardware.

The entire wardrobe, if this is desired, may be locked by one lock conveniently located at one end of the wardrobe.

Your inquiry will receive our very careful attention and a prompt reply giving valuable information will be sent.

Fairhurst Folding Partitions for Schools

These partitions are easily moved. The operating mechanism is so simple and positive that it is impossible to handle the units incorrectly.

THE Fairhurst "Unit Fold" Partition is a perfected development of over thirty years' work by John T. Fairhurst specializing in this line. It is manufactured by Park, Winton & True Company, established in mill work since 1855. A partition that can be moved quickly and easily into and out of position for the conversion of one room into two or more, or two or more rooms into one room.

The Fairhurst "Duo Fold" Partition is similar to the *Unit Fold* as to mill work, strength and efficiency of hardware, and ease of operation, the only difference being that the doors are linked up in pairs.

The number of moving parts in these partitions has been reduced to a minimum and the mechanical operation is so simplified that there is practically no danger of the partition getting out of order. The doors cannot be folded except when in proper position. An automatic locking device at top and bottom prevents movement except when doors are correctly placed. Each door is secured to the overhead operating hardware in such a way that even excessive settling of the building is automatically compensated for and the smooth operation of the doors is not affected.

Park, Winton & True Company

101 Park Avenue,

New York

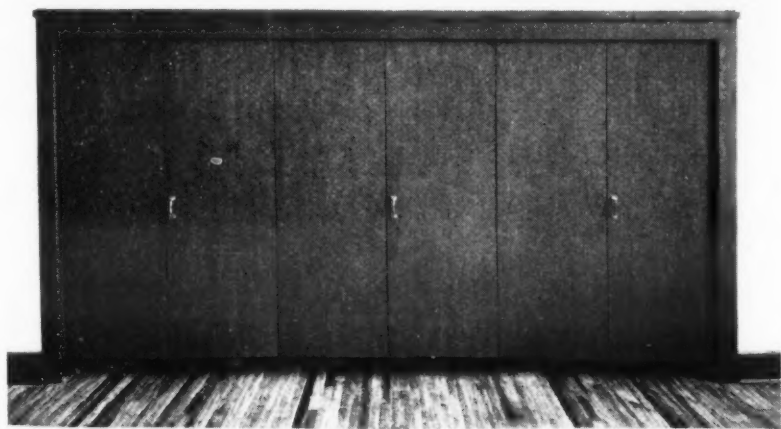
Factory

Addison, New York

1855

We can give you helpful information that will result in substantial savings in space and money for new school work as well as in remodeling work. A request for information will not obligate you in any way.

1930



Flush door, three compartment, wardrobes in the new Hewlett School, Hewlett, Long Island. Wardrobes designed by John T. Fairhurst, manufactured by Park, Winton & True Company. (Panel doors, or doors with blackboards are also available.)

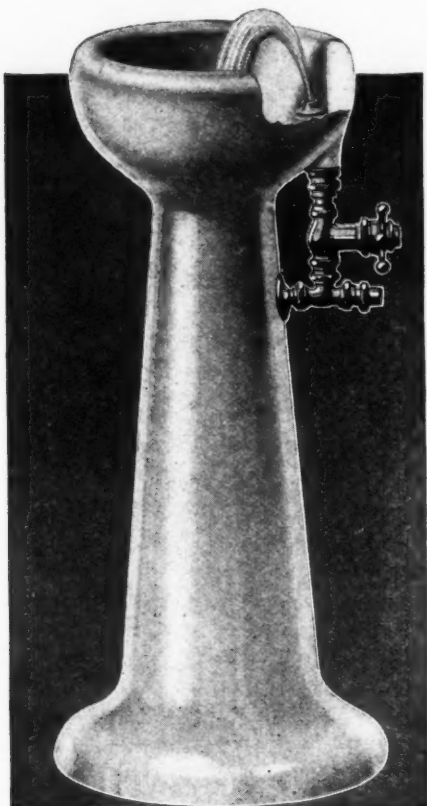


The Hewlett School wardrobes are the Dual Operating type. The left-hand door of each pair operates automatically when the right-hand door is moved. (Single Operating or Multiple Operating hardware can also be applied to all Fairhurst Wardrobes.)

Multiple Operating—The entire battery of doors may be opened or closed by handling *only one door*, the right- (or left-) hand door of any pair of doors.

All metal parts which are subjected to strain and constant use are designed to stand up under much rougher treatment than could possibly be imposed upon them. All wardrobes

R-S FOUNTAINS



Have Sanitary Features!

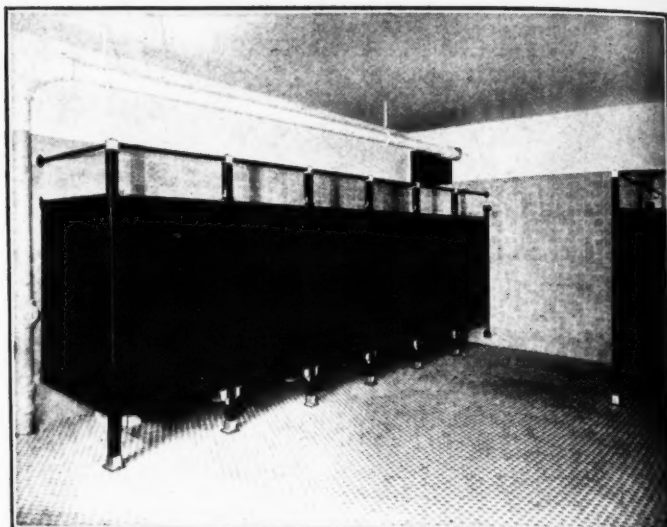
In addition to their clean and beautiful designs—Rundle-Spence drinking fountains have a bigger advantage in their special patented Vertico-Slant. This feature throws the water at an angle and consequently does not permit the lips to touch the nozzle. Naturally every drink is a sanitary one—a clean, clear, safe drink at all times.

The fountain pictured above is one of the R-S Line now available in colors.

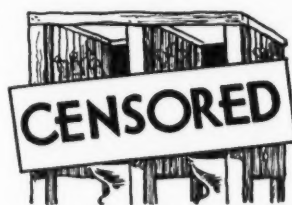
Write for complete information covering R-S Sanitary Drinking Fountains and Plumbing Fixtures and Supplies.

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RUNDLE-SPENCE

MORGAN SCHOOL, WASHINGTON, D. C.



School Toilets:

1900 Model vs. 1930

RECALL to your memory the typical school toilet room of a generation ago. Dark, damp, unsanitary, often not too clean. Walls and partitions embellished with anatomical sketches and inelegant phrases—the products of vivid but misguided imagination. All in all, not a good influence for growing children.

That dismal view is changed now. The modern school has modern toilets—well-kept, sanitary, day-lighted, expressive of wholesome hygiene. That Sany-metal Steel Toilet Partitions fit into this new picture goes without saying. Clean, cheerful, attractive—these substantial Unit Panel Partitions are a fine investment for the future of Young America. And the technique of the amateur artist in pencil medium is severely handicapped by their vitreous enamel finish, on which pencil marks are scarcely legible.

Equip your school with Sany-metal Toilet and Shower Compartments.

Sany-metal Products for Schools are: Toilet, shower, dressing and urinal compartments. Corridor and smoke screens. Metal doors and wainscot. Sany-metal Gravity Hinges. Write for New Catalog No. 30.

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TRADE MARK U.S. REG. *Toilet and Office*
PARTITIONS

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to choose from

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(Highly resistant to corrosion)

2. Page Armco Ingot Iron Fabric

(The purest and most uniform of all ferrous metals)

3. Page Copperbearing Steel Fabric

(Heavily galvanized after weaving)

4. Page Ornamental Wrought Iron

(The metal that serves for centuries)

LINEPOSTS—Tubular or  Section

64 service plants

The Page Fence Association offers this highly personalized service to their clients. The selection and erection of a fence to perform the required duty and

last the longest is not a job for the inexperienced or one to be undertaken lightly.

For that reason, Page maintains a staff of experts, distributed through 64 plants scattered throughout the whole country. These experts will assist you in the selection of the proper kind of fence for your purpose and will superintend its erection, thus insuring your satisfaction.

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grandstand



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[[Further information on our all-steel grandstands is given in our free Folder No. 87]]

Pittsburgh-Des Moines Steel Company

89 Neville Island, Pittsburgh, Pa.

991 Tuttle St., Des Moines, Ia.

693 Hudson Terminal Bldg., New York, N. Y.

(Continued from Page 102)

the windows are open, the shades hang at right angles to the windows and soon whip themselves to pieces.

To successfully guard swiveled windows, large, unsightly, boxlike guards must be built on the outside of the windows or the windows cannot be opened.

Arguments based upon the added area obtainable for ventilation from a swiveled window are nullified if the claims for successful operation of mechanical ventilation are recognized and admitted. One such claim is that mechanical ventilation can be operated successfully only when the windows in the building are closed.

18. *Pine and cypress sash, if painted regularly, is as cheap and as durable as any other kind of lumber. Is it acceptable?*

There are different kinds of pine, some of which are satisfactory for sash and some are not. Jack pine is very unsatisfactory. Southern pine of long fiber is very satisfactory if free from knots and softs.

Cypress sash generally warps and twists to such an extent that the sash cannot be operated.

When pine sash is used it should be painted promptly upon installation and painted regularly thereafter.

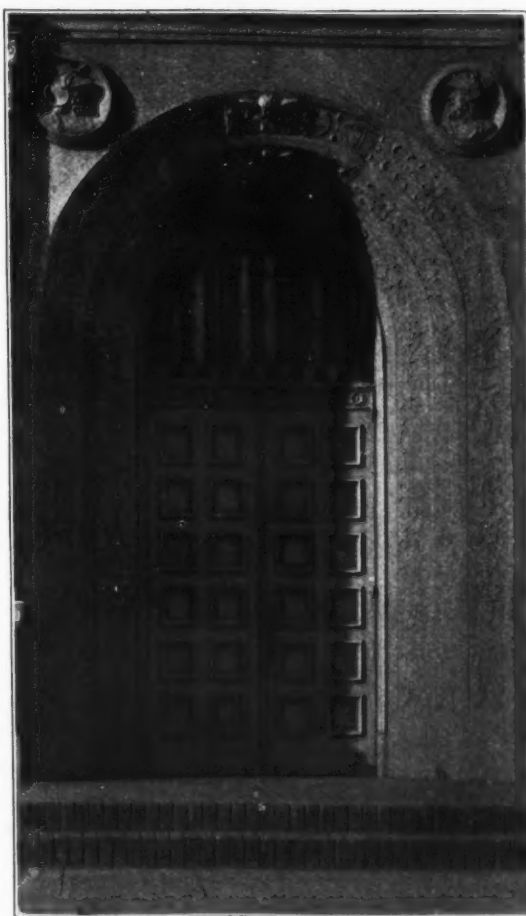
19. *Should pine or fir be used for inside wood trim instead of oak?*

The extra cost of oak trim above the cost of pine or fir in a 30-room elementary school building was \$4,200. Should the original saving resulting from the use of pine or fir be a deciding factor?

Is there a preference in the appearance of oak as compared with pine or fir?

During the war period, when the price of oak and other hard woods increased to such an ex-

tent as to make their use prohibitive, many schools which had previously used nothing but oak for trim were built with pine and fir trim. A sufficient time has elapsed to demonstrate that pine and fir, when properly cared for, are



A HEAVY SOLID TYPE OF DOOR IS NOT ALTOGETHER SUITED TO SCHOOL USE

just as durable as any other wood when used as trim, but must be stained, varnished, or painted more frequently than oak and other hard woods. The decision reached by many is that the use of pine and fir is not dependent upon savings in first cost but upon appearance and subsequent maintenance cost. Schools in the south have been finished for decades with native southern pine and the results have been eminently satisfactory.

Locality often has enabled a decision to be reached quickly: in the north, oak; in the south, pine.

20. *Should weather strips be installed on all outside windows and doors?*

Weather stripping of new and old window sash, especially in northern climates, avoids drafts, prevents the rattling of window sash, insulates against air and water leakage, and saves fuel. The stripping of old, loose sash has often saved the complete replacement of the sash.

For similar reasons, weather strips should be applied to all outside doors.

21. *Is it practical to install storm sash on all outside windows?*

Storm sash comprise an item which applies specifically to schools in northern climates. Storm sash bar light, are hard to clean, prevent proper ventilation by means of open windows, and require the operation of the ventilation system even when the outside air is warm enough to ventilate by open windows.

Any object breaking the glass in a storm window also usually breaks the glass in the inside sash, thus causing double loss.

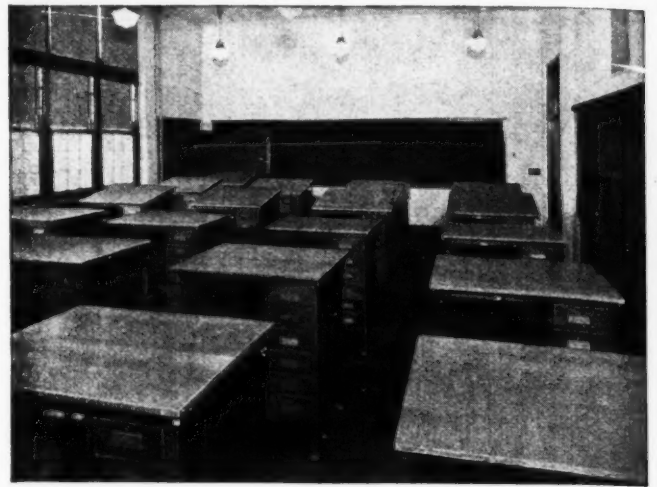
There is, undoubtedly, an economy in heat conservation when storm sash is used on school-house windows. Whether this saving offsets the objectionable features connected with the use

STURDY DRAWING TABLES

Sheldon Drawing Tables are constructed of high quality materials and are completely bolt re-enforced. Built strong and sturdy enough to stand the strain and stress of everyday schoolroom use. The individual student drawers will save hours and hours of time which with wall lockers is absolutely wasted. Remember, there is a Sheldon Table to meet every requirement.



Note the compactness and the stalwart appearance of the Sheldon Drawing Table at the left. It is perfectly capable of withstanding the abuses of the ordinary careless schoolboy.



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of storm sash and is worth considering in connection with economic schoolhouse operation is questionable.

22. Entrance doors.

Metal-covered entrance doors are heavy and costly. Solid wood doors without glass panels will save at least \$3 per door. Solid doors necessitate the burning of an electric light just inside the doorways at all times while school is in session as otherwise the space is dark and a danger hazard. Wood doors with glass panels have proved highly satisfactory wherever properly installed.

For some unknown reason, heavy metal-covered entrance doors on a school building were looked upon as a safety device, and in some mysterious way linked up with fire protection. They fulfill neither function. On the contrary, they often have been found to be very dangerous to small children who have been caught and squeezed between them, and often have proved to be a source of great danger when children have been prevented from leaving a burning building quickly and easily.

Heavy doors were, and in some places still are, looked upon as a bar to thieves. This is a fallacy, as thieves enter through windows and other easier means of ingress.

The use of massive metal doors (see plate) as an ornamental feature is giving place to the use of attractive, light-weight glazed doors, primarily out of consideration for the small child who often is not strong enough to open and handle a heavy door.

Double-hung, light-weight, glass-paneled doors are being looked upon with more and more favor in schoolhouse construction from the standpoint of appearance, ease with which they may be operated by small children, economy in first cost, low maintenance cost, and to provide natural light for the space just inside

the entrance. Instead of using double doors and a full width of opening without a mullion, which makes it almost impossible to avoid a wide slit between the doors, the practice is becoming quite general to hang two single doors with a small mullion between them. This type of door construction reduces weight, minimizes shrinking and swelling, and simplifies the application of panic bolts. It also makes possible the installation of weatherproof doors.

(To be Continued)



A LIGHT, GLAZED SCHOOL DOOR

NEWS OF OFFICIALS

♦ DR. W. W. KELLY has been reelected president of the school board at Green Bay, Wis.

♦ MR. C. A. TILDEN has resigned as business director of the schools at East Cleveland, Ohio.

♦ The school board of Buhl, Minn., has been reorganized, with the election of Mr. A. J. ERCHUL as president, Mr. GEORGE BARRETT as secretary, and Mr. WILLIAM MCCABE as treasurer. DR. A. W. SHAW was elected as a new member, to succeed M. A. Nichols, who resigned.

♦ MR. LEWIS E. MYERS has been elected president of the board of education at Chicago, Ill., to succeed H. Wallace Caldwell. MR. W. H. BRANDBURG was reelected as vice-president of the board. In accepting the office of president, Mr. Myers declared for an administration of rigid economy, to conserve finances and to restore the depreciated credit of the board. He pointed out that the most pressing necessity is the restoring of credit. Confidence may be restored by only one system — ruthless economy, he said, and no salary increases or new jobs will be permitted. At the present time the revenue is insufficient, and some new method of securing funds must be evolved. There is a seat shortage of 55,638 and the building program will take care of only 27,000 of this shortage. The third major program is the reassignment of teachers and civil service employees to provide the maximum in efficiency. Teachers will be transferred to districts in which they reside in order to prevent waste of time in traveling from home to school and vice versa.

♦ DR. BURT MANGOLD has been reelected as president of the school board at Decatur, Ind. MRS. CARRIE HAUBOLD was reelected as secretary, and Mr. M. E. HOWER as treasurer.

♦ REV. W. R. WILLIAMS, who recently declined an offer as superintendent of schools at Mt. Sterling, Ohio, has accepted the superintendency at Unionville Center for another term of two years.

♦ SUPT. E. J. McNAMARA, of Longview, Wash., has been reelected for another year.

♦ MR. C. O. GILBERT, of Hillrose, Colo., has been elected superintendent of schools at Fleming.

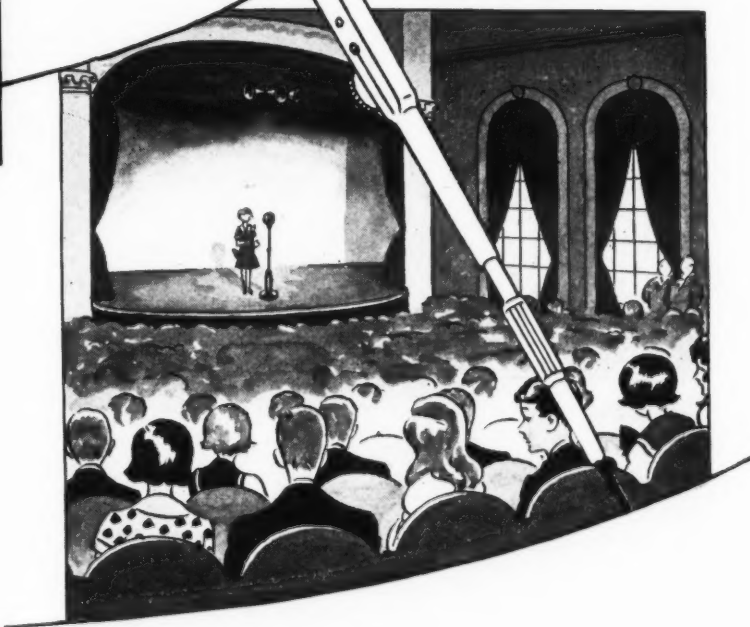
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ALMOST A WHISPER — YET 1500 HEARD!

Even faint young voices carry to the rear seats when the auditorium is equipped with the Western Electric Public Address System. A roomful of several hundred hears every word easily.

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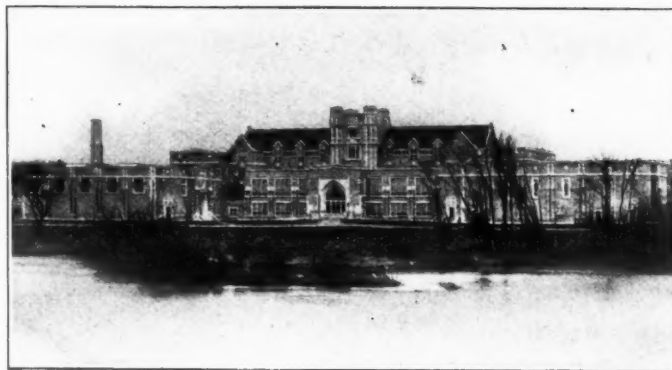
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Teachers and Administration

THE BENEFITS OF TEACHERS' RETIREMENT

A sound teachers' retirement system is necessary for raising the standard of the teaching profession, for improving the efficiency of the school system, and for protecting the children from teachers rendered incompetent through disability or advanced age.

Mr. Webster H. Pearce, state superintendent of public instruction of Michigan, discussing the benefits of teachers' retirement systems in *The U. S. Daily*, recently pointed out that a sound retirement system raises the whole tone of the teaching profession by automatically removing from the profession those teachers who have become less effective through age or disability; by encouraging a higher type of young people to enter the profession; by encouraging young men and women of exceptional ability to stay in the profession; and by making it possible for every teacher in the system to do better work because he or she is free from worries about the economic future.

Such a system, said Mr. Pearce, protects children from teachers rendered incompetent by disability or advanced age, by making it possible for such teachers to be automatically retired, and to relieve school boards from feeling an obligation to continue their employment because of their economic needs. It makes it unnecessary for teachers to continue teaching beyond the age at which they can render their best service, thus making it possible for school boards and superintendents to fill their places with young, better-trained, and more efficient teachers.

On the constructive side, it attracts a higher type of young people into the teaching profession

and thus elevates that profession by compensating these young people somewhat for the relatively low salaries which teachers generally receive.

A sound teachers' retirement system tends to retain the more capable and ambitious teachers in the service, since they do not have to worry about their future, and can continue in the profession for which they are best fitted.

Under the retirement system, teachers can give their whole time to their profession and not be compelled by economic necessity to neglect their professional improvement, and sometimes their schoolwork, to provide in every way possible funds to safeguard their declining years.

A NEW SYSTEM OF TEACHERS' MARKS AT CONNERSVILLE, IND.

Supt. E. C. Dodson, of Connerville, Ind., has recommended to his teachers the use of a new system of marking, based on a normal distribution curve, and complying with the requirements of the state education department. The following is the type of grading system recommended:

A—Excellent	3%—10%
B—Good	20%—22%
C—Average	40%—50%
D—Poor	20%—22%
F—Failure	3%—10%

It is therefore recommended that we change our system of marks throughout to conform to the system recommended by the state department. The A+ mark has been generally misunderstood. The original intent was not to consider it a special point in the scale of marks, but merely to add the plus to the A group when a student is outstanding. The A+ mark is now abolished and we are suggesting a five-point scale, as follows:

A—Excellent	96 to 100 (inclusive)
B—Good	90 to 95 (inclusive)
C—Average	81 to 89 (inclusive)
D—Poor	75 to 80 (inclusive)

It is prohibited to attach a plus or a minus sign to any of these letters in any permanent records or in the report to parents.

Native intelligence, industry and attitude should be elements entering into the marks of the student. Some of the outstanding characteristics for the various marks are listed below. Many of the items

have been adapted from a study made by the teachers and principal of the senior high school, and from a statement in the Junior High School Manual (pp. 14, 15, 16).

For A Mark—96 to 100 inclusive

1. Unusual effort, unusual ability. Works willingly and effectively alone.
2. All work prepared on time.
3. Complete mastery of all assignments and outside work.
4. Requires little assistance. Self-directing.
5. Makes rapid progress.
6. Language excellent (both spoken and written).

For B Mark—90 to 95 inclusive

1. Industrious and willing.
2. Adequate preparation. Work completed on time and in good order.
3. Work slightly under complete mastery of assignment and supplementary work.
4. Follows direction almost perfectly.
5. Progress noteworthy and steady.
6. Adequate use of spoken and written English.

For C Mark—81 to 89 inclusive

1. Industrious and willing.
2. More than a minimum of preparation.
3. Good general knowledge; meets the requirements.
4. Follows directions fairly well.
5. Improvement not doubtful.
6. Adequate use of spoken and written English.

For D Mark—75 to 80 inclusive

1. Industrious.
2. Attention wavering and uncertain.
3. Preparation partial and fragmentary.
4. Meets the minimum requirements.
5. Progress slow but perceptible.
6. Language inadequate, but intelligible.

F Mark—No Credit. This mark is not defined as it results from many causes: low intelligence, sickness, absence from school, defective eyes and ears, undernourishment, improper clothing, frequent transfers from one school to another, and others. All work marked with an F mark must be repeated except as indicated below.

I—Incomplete. May be used on reports to parents but must not be used as a semester mark. Some one of the marks in the five point scale must be used as a semester mark, but such mark may be explained by an addenda to the report. Work may be made up if done before the close of the semester.

W—Withdrawn. The letter W placed upon records indicates that a student has withdrawn, but does not evaluate the work of the student in any respect.

TEACHERS AND ADMINISTRATION

♦ The Active Workers' Association of the Order of Independent Americans, representing 15,000 citizens, has presented a petition to the Philadelphia board of education, urging that married women

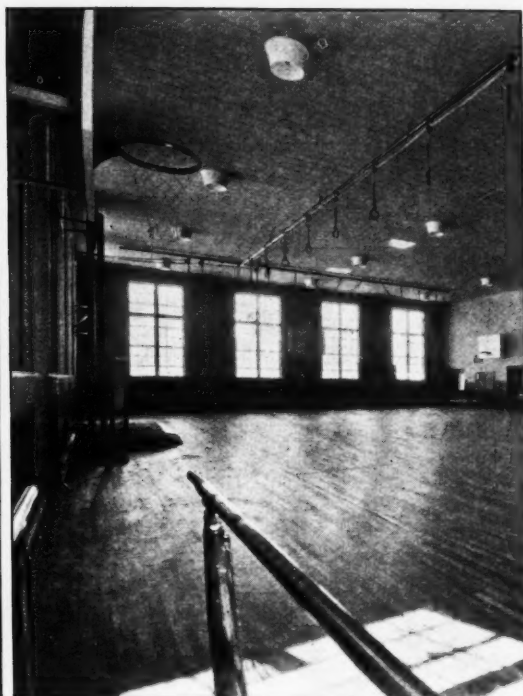
(Concluded on Page 110)



Acousti-Celotex subdues the clatter of dishes and babel of voices in the Grosse Point High School cafeteria ... and adds decorative beauty to the ceilings as well.



You can well imagine the terrific din these typewriters are capable of creating. But Acousti-Celotex in the ceiling subdues this nerve-racking clatter and makes concentration easier.



Acousti-Celotex controls sound perfectly in the Grosse Point High gymnasium. Noise is quickly absorbed ... making the work of instructors easier, and increasing the pleasure of watching games.



Acousti-Celotex solved the *noise problem* for this Michigan School

LECTURES, study periods, and entertainment in the Grosse Point, Michigan, High School are never disturbed by distracting noise.

Acousti-Celotex applied to the ceilings of this beautiful school subdues classroom noises ... quiets the racket in corridors and gymnasiums ... adds to the enjoyment of speeches and school entertainments by providing correct acoustics.

Acousti-Celotex comes in finished

units, durable and permanent, which are quickly applied to the ceilings in old or new buildings. The natural buff color and pleasing fibre texture of Acousti-Celotex enhance the beauty of any ceiling. And it may be painted and repainted without impairing its acoustical efficiency.

Let us explain how you can subdue noise and improve the acoustics in *your* school with this remarkable material.

Write for our new folder, "Better Study Conditions in Schools."

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FOR LESS NOISE—BETTER HEARING



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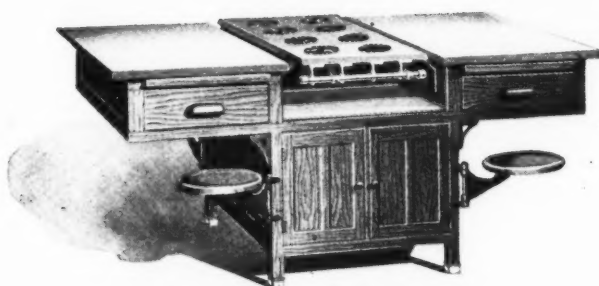


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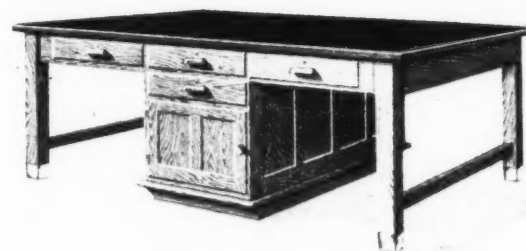
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Student's Biology Table No. 870

(Concluded from Page 108)

teachers in the schools, whose husbands earn a livelihood, be dismissed this fall to provide positions for nearly 1,000 unmarried teachers, who are out of employment. In the petition, it was pointed out that it is unfair to the parents who made sacrifices to have their daughters receive teachers' diplomas, which now really mean nothing on account of the condition of unemployment.

♦ The oversupply of teachers for the elementary schools of New York City is increasing so rapidly that candidates from institutions other than the city colleges and training schools have no chance of qualifying, since the board of examiners has practically barred outsiders. In announcing the additions to the eligible list resulting from the January examination, it was noted that only eight of the 2,030 candidates who applied from outside institutions were listed among the women who qualified, and none among the men.

There were 3,330 applicants for the January test, and of these, 2,030 came from outside institutions, and 1,300 from the city colleges and three city training schools. Those who qualified will have little chance of appointment within two years, as the waiting list has 3,136 names, which is sufficient for a two-year period.

♦ Teachers employed in California must reside within the state, according to a recent opinion of Attorney General Webb.

♦ The state teachers' colleges of Wisconsin have reported increased enrollments at the summer sessions due to business depression and unemployment. The Milwaukee Teachers' College, with 1,465 enrolled in the summer course, had the largest enrollment of any of the nine colleges in the state.

♦ The New York City Teachers' Retirement System has recently occupied its new offices at 253 Broadway, corner of Murray St. In its new quarters, the pension board will have the entire twelfth floor of the Broadway Building, with ample room for all the various divisions of the system. One of the features of the offices is the fileroom, in which all the important records of the system will be safeguarded.

The new quarters, which are nearly twice as

large as the old ones, provide accommodations for teachers visiting the board, a restroom, and tables and chairs where teachers may make out their pension papers.

♦ New York, N. Y. The school board has adopted a resolution, providing for the assignment of teachers to serve in the evening high schools during the 1930-31 season, for four periods a night, whenever it is found necessary. Teachers so assigned will be paid proportionately for such service. It is planned to assign a few teachers in selected schools for the entire four periods, in order to relieve congestion in the first and fourth periods.

♦ Miss May Prentice, the oldest teacher in the Kent, Ohio, schools, retired at the close of the school year in June, after completing 57 years of service. In addition to her work as teacher and principal, Miss Prentice has written a number of articles for educational publications. A few years ago she won a prize in a national contest conducted by a book company.

♦ New Haven, Conn. The school board has increased the salaries of evening-school teachers from \$3 to \$3.25 and \$3.50 per evening, beginning with October.

The Carnegie Foundation for the Advancement of Teaching, in the 24th annual report of its president for the year ending June 30, 1929, offers a summary of data on teachers' retirements, annuities, and insurance plans as carried out in the schools and colleges of the country.

The report shows that, with a total expenditure of more than \$18,817,000 in retirement allowances and pensions for professors during the period ending with June, 1929, the allowances of the Foundation have formed the most generous nongovernmental pension system ever operated for a professional group.

A total of 49 retired professors and administrative officers have received maximum allowances of \$4,000, the first of which was granted in 1909, and 7 of which were granted in 1928. Only 34 allowances, of the total of 837 granted, have been less than \$1,000, most of which were granted before the end of 1908.

THE MEDFORD SALARY SCHEDULE

The school board of Medford, Mass., has adopted a *preparation-development-merit salary schedule* for regular teachers and supervising principals. The schedule, which is based on the amount of professional preparation, provides for minimum and maximum salaries, and supermaximum salary for teachers who have served on the maximum rating and who have rendered satisfactory service.

Under the schedule, teachers with two years of professional training beyond the high school will be paid a minimum of \$1,000, with three increments of \$100, and four of \$125, up to a maximum of \$1,800. Teachers with three years of preparation will be paid a minimum of \$1,100, with three increments of \$100, and four of \$125, up to a maximum of \$1,900. Teachers with four years of preparation will be paid a minimum of \$1,200, with three increments of \$100, and four of \$150, up to a maximum of \$2,100. Teachers with five years of training will be paid a minimum of \$1,300, with three increments of \$100, and four of \$150, up to a maximum of \$2,200. A supermaximum of \$100 will be paid to any teacher who has rendered satisfactory service and who has served on the maximum rating for at least a full school year. The salaries of men teachers, under the schedule, will be \$500 above that of women teachers. Heads of departments will receive \$400 additional.

The salary schedule for supervising principals in elementary schools is based on the number of rooms over which the principal presides. Under the schedule, principals in charge of eight to eleven rooms will receive a minimum of \$2,200, with three increments of \$100, up to a maximum of \$2,500. Principals of buildings with twelve to fifteen rooms will be paid a minimum of \$2,300, with three increments of \$100, up to a maximum of \$2,600. Principals in charge of sixteen to nineteen rooms will be paid a minimum of \$2,400, with three increments of \$100, up to a maximum of \$2,700. Principals in charge of twenty or more rooms will be paid a minimum of \$2,500, with three increments of \$100, up to a maximum of \$2,800.

AS SCHOOL STARTS —



Ask yourself these questions —

- 1.—Is your insurance adequate to cover your school property in case of a loss due to fire?
- 2.—Has sufficient insurance been added to cover new equipment?
- 3.—Has every safeguard been taken to protect the lives entrusted to your care?
- 4.—Have you fulfilled your obligation to the community by insuring in a strong stock company that will pay losses fairly and promptly?
- 5.—Have the fire prevention engineers of The Home of New York inspected your school property?

An engineering staff is maintained by us for your use. The Home of New York will gladly cooperate with your architects if you are planning to build a new school or will inspect your present school specifying fire prevention measures—thus making the lives of the young people safer. This service can be obtained through the local Home Agent in your community or our main office at New York. This will not entail any obligation on your part—call us before it is too late!

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Reputation

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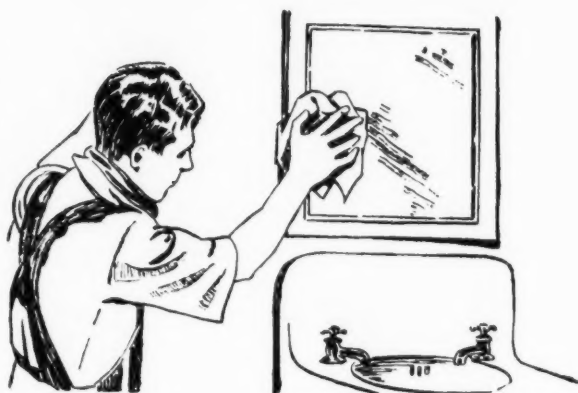
"Health and Cleanliness Come First"

—says another advertiser in this magazine

SO TRUE is this statement that despite the general recognition of its importance in school hygiene, the METHODS of maintaining high standards of sanitation, particularly in washrooms, are sometimes not given the attention they deserve.

Cleaning is a science and study that requires the same careful consideration by school executives as any administrative or teaching department.

No cleaning materials should be purchased except on the basis of efficiency, economy, and their effectiveness in combating dirt in all forms.



It is in washrooms where danger often lurks. Wash stands, shower stalls, toilet enclosures, and similar equipment not kept scrupulously clean provide breeding places for germs that are harmful to health of students.

Every day more schools are finding that Oakite, because of its safe, efficient cleaning action, assures spic and span, film-free surfaces in washrooms that are the outward, true indication of

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Drop us a line and get the detailed facts about this modern economical cleaner. A post card will do.

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Oakite Service Men, cleaning specialists, are located in the leading industrial centers of the United States and Canada.

NEW RULES & REGULATIONS

GLENDALE TEACHERS' RULES

The school board of Glendale, Calif., has adopted new rules and regulations governing teachers' contracts and salary schedules. The rules read as follows:

Employees listed in the following schedule except as stated in B4 shall be paid on the basis of a "school" month, consisting of 20 school days. Full-time employees shall be paid for the days actually engaged in their respective duties, and shall also receive:

a) Full pay "sick leave" for not exceeding 5 days during the school year.

b) Full pay for not exceeding 10 days when quarantined by city or county health officers. No employee shall receive quarantine pay for more than two separate periods in one year.

c) Full pay for not exceeding 3 consecutive days in case of acute bereavement.

d) Full pay for time spent in court, if employee has been regularly subpoenaed as a witness.

e) Full pay during any period schools are closed on account of epidemic.

Employees with fractional time assignments shall receive the same fraction of sick leave, quarantine and epidemic pay and full allowance under c and d. Teachers doing substitute work shall receive pay only for days actually at work and no allowance for a, b, c, d and e.

Teachers entering the employ of the Glendale union high-school district by appointment shall be given full credit for not exceeding 5 years approved previous public-school teaching experience; vocational teachers may receive the same credit for approved vocational experience. All such teachers shall receive the entering salary rate during the first two years (150 days each) of the 3-year probationary period.

New teachers will be given one-half credit for all elementary experience, not exceeding 5 years

of full credit. Only those teachers shall be given the automatic salary increase who have completed 2 years of probationary service.

The board of trustees reserves the right to compensate teachers or other certificated employees for time spent in performing special service in or out of the state of California, directed by the board. The board reserves the right to compensate teachers and other certificated employees for such vacations or holidays as shall be declared by the board.

The board of trustees reserves the right to terminate the contract after 170 days of actual teaching on account of the unavailability of funds. The board may change the assignment of duties of certificated employees whenever the education needs of the district require readjustments.

RULES AND REGULATIONS

♦ Pittsburgh, Pa. Under a new rule of the school board, training-school graduates will be given credit for their substitute experience prior to appointment, on the following basis: The number of months of credit allowed toward the month of the first increment will be equal to the total number of days served as a substitute, divided by 20. Fractions of a month will not be counted, unless the fraction completes the month in which the teacher began regular service. The same rule applies in computing the teaching experience of graduates of 4-year courses in approved institutions of learning, who serve as substitutes prior to their appointment as regular teachers.

♦ The Boston school committee has recently strengthened an order passed in June prohibiting the employment of nonresident teachers. The formal rules of the committee have been amended as follows:

No person shall be appointed to any position in the employ of the school committee of the city of Boston after January 1, 1931, who is not a legal resident of the city of Boston; provided that this order shall not affect those already on the eligible lists or on civil service lists for Boston appointment, nor shall it affect those who have been admitted to the Teachers College up to that date; and provided further, that all residents appointed un-

der the terms of this order to any position in the school department and all residents admitted to the Teachers College shall continue to have a domicile in this city during their employment or during attendance at the Teachers College.

♦ New York, N. Y. The school board has revised its rules governing the relicensing of teachers who had resigned from the school service, but have applied for reappointment. The rules provide for a new method of procedure from that which has been in force for several years.

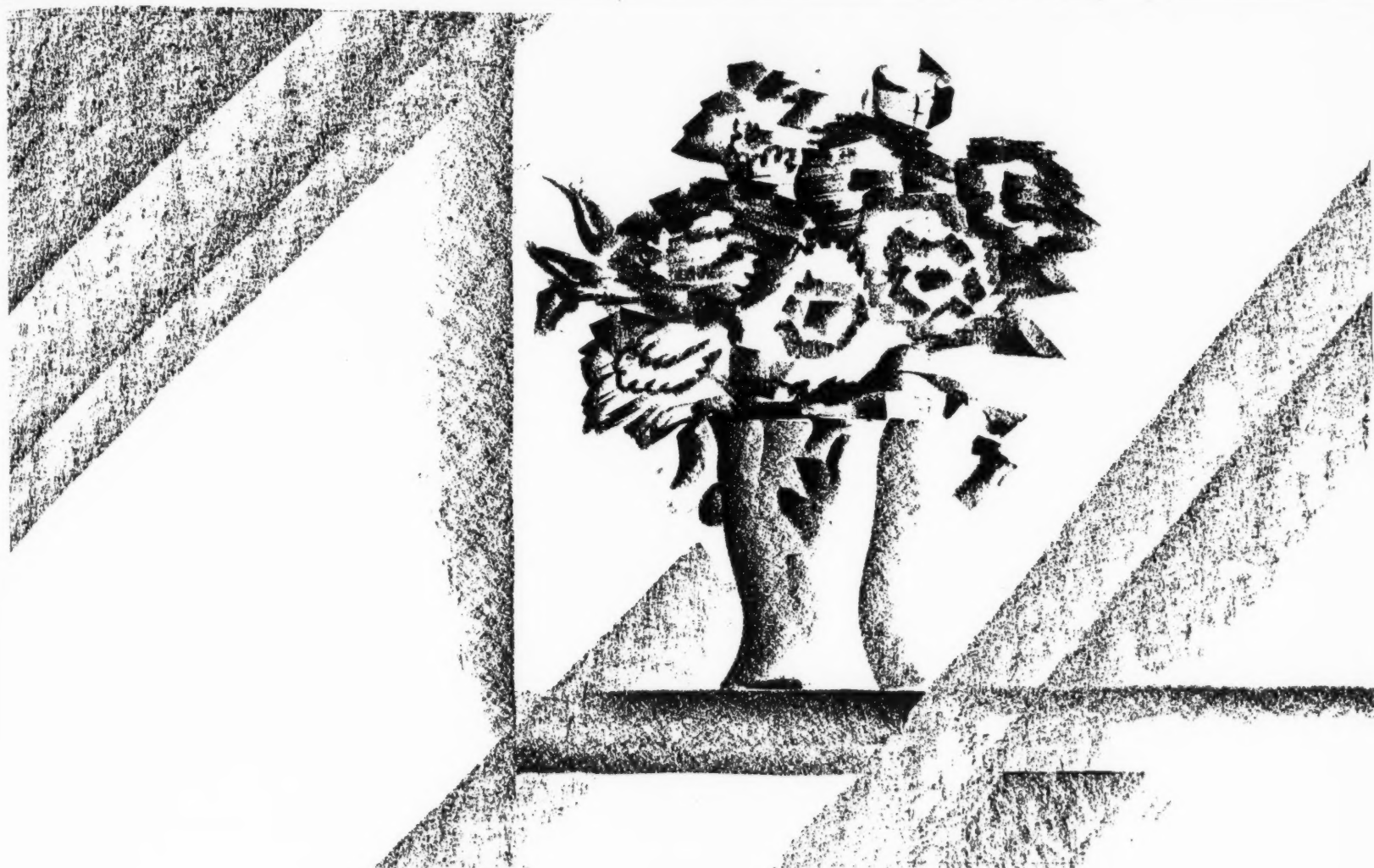
Under the rules, any person is eligible for a relicense within ten years after the termination of service, if he or she has served under permanent appointment, or within five years from the date of termination of service has served under a probationary appointment. The names of persons passing the examination will be placed on an eligible list. Persons appointed from such a list will be appointed for a probationary period of three years. A regular license will be valid for the period of the holder's service after appointment, such license to be valid for a period of one year after the date of termination of such service under the license.

TEACHING NOT HAZARDOUS OCCUPATION

♦ A teacher in a state normal school is not engaged in a hazardous occupation, under the Oregon law, according to an opinion of Attorney General I. H. Winkle, given to Mr. C. C. Colt, chairman of the insurance committee of the state board of higher education.

The opinion held that, under the provisions of the workmen's compensation law of the state, if the state or any state department engages anyone, as an employer, in any hazardous occupation, it is subject to the provisions of the law. It was pointed out that there is nothing in the law which would apply to an instructor in a normal school, or to any other teacher, or to make the work performed by such teacher a hazardous occupation within the law.

♦ The school board of LaPorte, Ind., has adopted a budget of \$330,896 for the school year 1930-31. The tax levy of \$1.34 has been retained for the next year.



You can't keep dust out of a school . . .

It is tracked in—comes in through windows and is produced in volumes by blackboards and other normal school activities.

But you can remove dirt and dust soon as it arrives.

The Spencer System

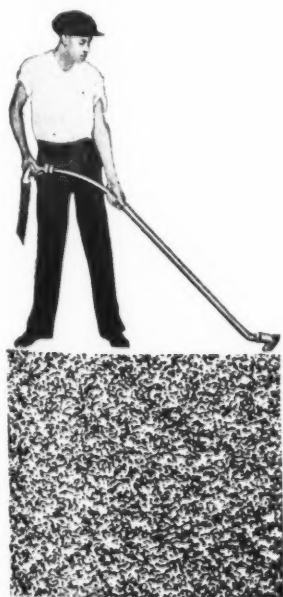
cleans the main avenues of travel quietly and quickly during the opening exercises.

The biggest cause of dust is thus removed at its source. Rooms are cleaned while vacant or between periods if necessary and the whole school is given a perfect cleaning every day without heavy labor costs.

The Spencer System is not only the most economical method of cleaning; it is the only method that will clean thoroughly according to tests made by experts in school cleaning and maintenance.

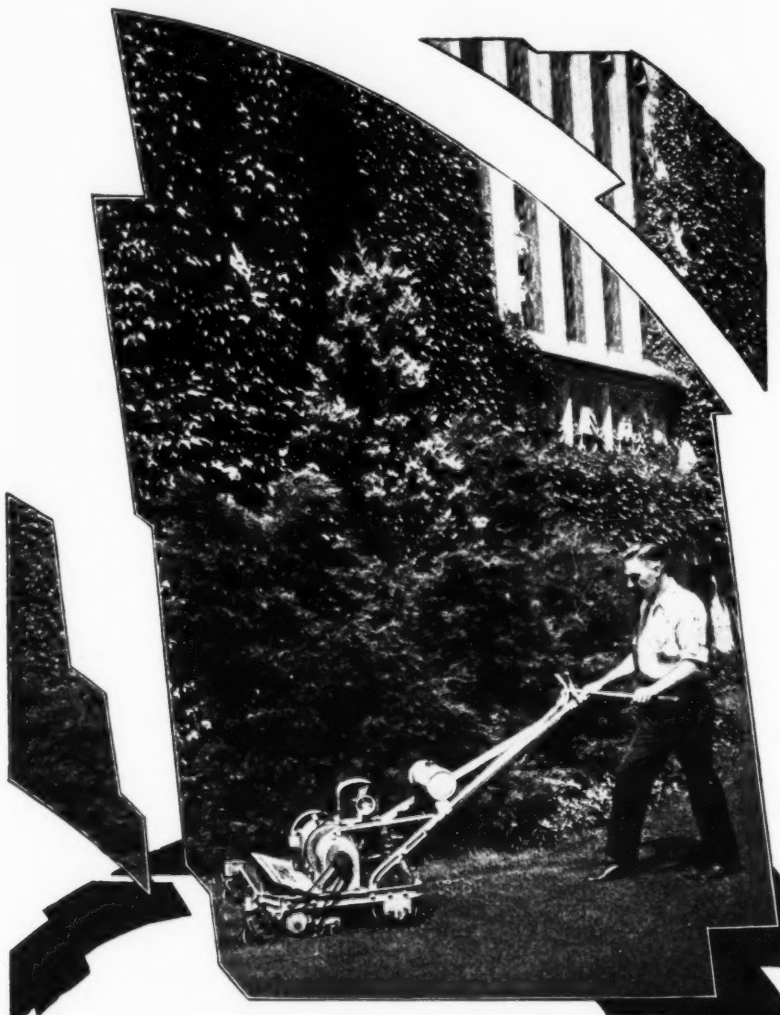
Let us send you the Bulletin and a list of Spencer Equipped Schools.

The Spencer Turbine Company, Hartford, Conn.



SPENCER CENTRAL CLEANING SYSTEM

COLDWELL



Above: "Twin-Thirty" motor lawn mower. Mows and rolls simultaneously 6 to 8 acres a day on one gallon of gasoline. Riding sulky may be had as extra equipment.

Beautiful School Lawns and Well Kept Athletic Fields Are No Longer a Serious Problem

THE Coldwell Dependable Power Lawn Mowers and Rollers produce finest possible results at surprisingly small expense.

Let us demonstrate on your own grounds how simply and economically your lawns and athletic fields can be kept in the pink of condition.

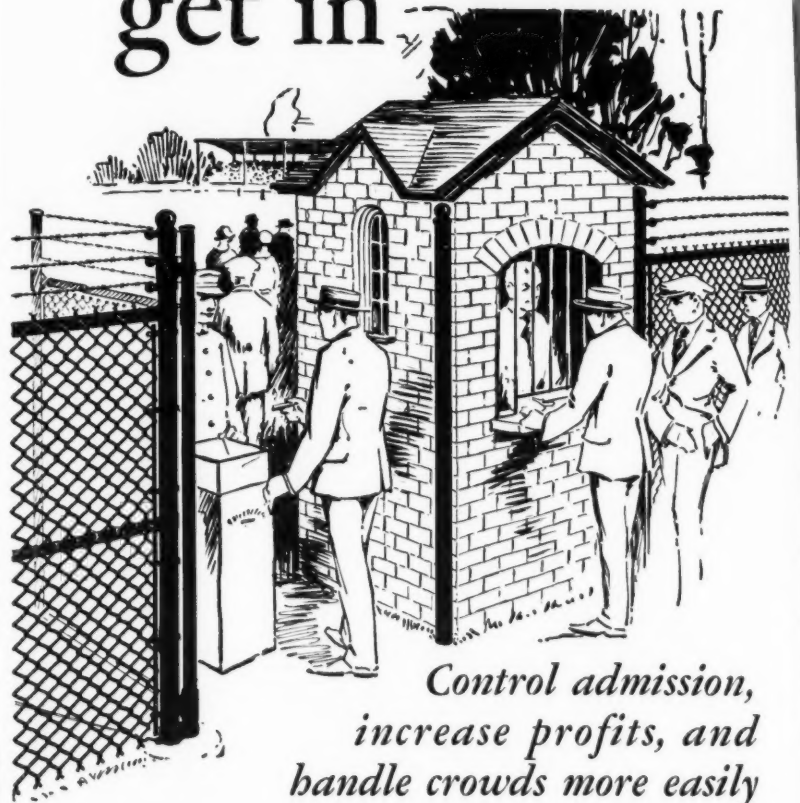
Full particulars and name of nearest Coldwell agency on request.

* * *

COLDWELL LAWN MOWER COMPANY,
NEWBURGH, N. Y., U. S. A.

In Canada—Taylor-Forbes Co., Ltd., Guelph
Manufacturers of DEPENDABLE Lawn Mowers
HAND, HORSE, GASOLINE, ELECTRIC

Everyone must pay to get in



*Control admission,
increase profits, and
handle crowds more easily*

The day you fence your athletic field you take a big step toward putting sports on a money-making basis.

At once games become more attractive to sport fans. Attendance increases. And every spectator means another dollar in your cash drawer because *everyone must pay* to get in. The increase in revenue is surprising.

Moreover, the operating expense is less because no guards are needed at the property lines. Crowds enter and leave the field in an orderly manner. Landscaping and field equipment are protected at all times.

Cyclone Fence is made in several designs that are widely used for athletic field protection. Unclimbable, strong, durable. Made of weather-resisting copper-steel. Covered with a smooth, dense coat of pure zinc. No chance for rust to start. Erected on H-column posts set in reinforced concrete foundations.

Gates of various widths are supplied to match the fence. Also woven wire signs for main entrance gates.

Cyclone Engineers look after the entire installation job. We take complete responsibility. One of our sales engineers will be glad to help you plan your fencing. Phone, wire or write for information.

Cyclone Fence

All chain link fence is not Cyclone. This nameplate identifies the genuine Cyclone Fence.



Cyclone Tennis Court Enclosures and Backstops

CYCLONE FENCE COMPANY, General Offices: WAUKEGAN, ILL.
Branch Offices in All Principal Cities

UNITED STATES STEEL CORPORATION

Works and Offices: North Chicago, Ill., Cleveland, Ohio, Newark, N. J., Fort Worth, Texas. Direct Factory Branches: Albany, Atlanta, Baltimore, Birmingham, Boston, Buffalo, Charlotte, Chicago, Cincinnati, Dallas, Des Moines, Detroit, Grand Rapids, Hartford, Houston, Indianapolis, Jacksonville, Kansas City, Milwaukee, Mineola, N. Y., Minneapolis, Mount Vernon, N. Y., New Orleans, New York City, Oshkosh, Peoria, Philadelphia, Pittsburgh, Providence, Richmond, Shreveport, St. Louis, San Antonio, Toledo, Tulsa, Wilkes-Barre, Youngstown.



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Pacific Coast Division:
STANDARD FENCE COMPANY, Oakland, Calif.



BUS EQUIPMENT

a new standard
of pupil comfort—safety—health

Heaters

A continuous circulation of fresh, odorless, heated air to all parts of the school bus promotes pupil comfort and health. The N-L Heater includes a high speed blower fan, controlled by the driver, that insures efficient heat distribution regardless of bus speed. Easy to install, reliable in operation, and reasonably priced.

Ventilators

N-L offers a complete line of exhaust ventilators, the newest being the No. 70 Ventilator, using a highly efficient blower type fan. This ventilator is particularly valuable when the bus is heavily loaded and traveling at slow speeds, where the ordinary roof ventilator is not sufficient. Regulated by the driver without leaving his seat, it rapidly removes stale, bad air regardless of weather and load conditions.

Flasher Stop Signal

Instantly as the foot brake is applied, the N-L Flasher Stop Signal catches the attention of the most careless motorist. A vivid, brilliant attention-demanding signal, flashing its warning long distances in both directions. An entirely new application for the most successful type of warning signal.

Write for complete information

The Nichols-Lintern Co.

7960 Lorain Ave.

Cleveland, Ohio

THE BONDED INDEBTEDNESS OF CITY SCHOOL SYSTEMS

The following table of the bonded indebtedness of city school systems is taken from a compilation prepared by the Detroit Bureau of Municipal Research and represents the situation as it existed on January 1, 1930. The original study was supplemented by figures compiled on July 1, 1930, from cities which failed to report to the Detroit Bureau.¹

City	School Bonded Debt
GROUP I	
Population 500,000 and over	
1. New York, N. Y.....	\$305,052,056*
2. Chicago, Ill.....	None
3. Philadelphia, Pa.....	65,911,000
4. Detroit, Mich.....	70,190,350
5. Los Angeles, Calif.....	51,740,738
6. Cleveland, Ohio.....	27,198,000
7. St. Louis, Mo.....	2,079,000
8. Baltimore, Md.....	25,742,923
9. Boston, Mass.....	9,285,800
10. Pittsburgh, Pa.....	23,933,269
11. San Francisco, Calif.....	14,975,000
12. Buffalo, N. Y.....	30,579,064
13. Washington, D. C.....	No bonded debt
14. Milwaukee, Wis.....	9,771,500

GROUP II	
Population 300,000 to 500,000	
15. Newark, N. J.....	\$ 18,573,200
16. Minneapolis, Minn.....	24,412,044
17. New Orleans, La.....	6,635,000
18. Cincinnati, Ohio.....	15,292,000
19. Kansas City, Mo.....	21,562,500
20. Seattle, Wash.....	10,822,000
21. Indianapolis, Ind.....	11,191,000
22. Portland, Ore.....	9,755,152
23. Louisville, Ky.....	9,966,400

¹ National Municipal Review, June, 1930.

*Estimated.

**Figures obtained directly from the school system by the SCHOOL BOARD JOURNAL, July, 1930.

City	School Bonded Debt
24. Rochester, N. Y.....	11,638,890
25. Jersey City, N. J.....	15,493,500
26. Toledo, Ohio.....	13,112,000

GROUP III	
Population 100,000 to 300,000	
27. Columbus, Ohio.....	\$ 11,206,250*
28. Denver, Colo.....	\$ 10,002,000
29. Providence, R. I.....	9,450,000
30. Oakland, Calif.....	(Not reporting)
31. St. Paul, Minn.....	9,546,000
32. Atlanta, Ga.....	6,517,000
33. Akron, Ohio.....	9,341,091
34. Omaha, Neb.....	10,026,000
35. Birmingham, Ala.....	10,486,000
36. San Antonio, Texas.....	5,007,500
37. Dallas, Texas.....	7,584,550
38. Syracuse, N. Y.....	9,748,361
39. Worcester, Mass.....	914,000
40. Richmond, Va.....	5,540,395
41. Memphis, Tenn.....	5,038,000
42. New Haven, Conn.....	522,000
43. Dayton, Ohio.....	7,272,665
44. Norfolk, Va.....	5,982,051
45. Youngstown, Ohio.....	(Not reporting)
46. Hartford, Conn.....	7,823,799
47. Houston, Texas.....	13,082,500**
48. Fort Worth, Texas.....	4,869,500
49. Tulsa, Okla.....	6,816,836
50. Grand Rapids, Mich.....	4,772,250
51. Bridgeport, Conn.....	4,311,000
52. Miami, Fla.....	8,938,000
53. Des Moines, Iowa.....	8,046,500
54. Springfield, Mass.....	2,353,500
55. Flint, Mich.....	9,895,500
56. Oklahoma, City, Okla.....	6,108,000
57. Paterson, N. J.....	7,707,000
58. Scranton, Pa.....	5,091,000
59. Jacksonville, Fla.....	(Not reporting)
60. Nashville, Tenn.....	1,699,000
61. Trenton, N. J.....	5,505,050
62. Salt Lake City, Utah.....	4,909,000
63. Camden, N. J.....	3,951,250
64. Erie, Pa.....	5,024,000**

City	School Bonded Debt
65. Wilmington, Del.....	1,106,000
66. Cambridge, Mass.....	(Not reporting)
67. Fall River, Mass.....	3,230,000
68. Yonkers, N. Y.....	8,250,100
69. Albany, N. Y.....	5,317,830
70. San Diego, Calif.....	4,783,275
71. New Bedford, Mass.....	2,975,000
72. Kansas City, Kan.....	2,508,500
73. El Paso, Texas.....	2,415,000
74. Duluth, Minn.....	3,925,000
75. Canton, Ohio.....	6,481,000
76. Elizabeth, N. J.....	5,020,350
77. Reading, Pa.....	6,141,400
78. Tampa, Fla.....	5,209,500
79. Lowell, Mass.....	(Not reporting)
80. Tacoma, Wash.....	2,442,000
81. Spokane, Wash.....	\$ 1,687,000
82. Long Beach, Calif.....	8,580,285
83. Lynn, Mass.....	2,533,250
84. Knoxville, Tenn.....	2,545,000
85. Fort Wayne, Ind.....	3,760,000
86. Utica, N. Y.....	1,938,290
87. Somerville, Mass.....	1,655,000**
88. Waterbury, Conn.....	1,888,000

GROUP IV	
Population 50,000 to 100,000	
89. Savannah, Ga.....	\$ None
90. Hamtramck, Mich.....	2,910,000
91. Allentown, Pa.....	4,276,700
92. Wichita, Kans.....	1,392,500
93. Evansville, Ind.....	2,693,100
94. Bayonne, N. J.....	4,578,900**
95. Lawrence, Mass.....	1,436,500
96. Schenectady, N. Y.....	2,593,500
97. Wilkes-Barre, Pa.....	595,000
98. Gary, Ind.....	3,434,000
99. Harrisburg, Pa.....	3,630,500**
100. Highland Park, Mich.....	4,445,000
101. South Bend, Ind.....	3,750,000
102. Manchester, N. H.....	1,754,500
103. Peoria, Ill.....	486,000
104. Rockford, Ill.....	1,125,000
105. Charlotte, N. C.....	1,854,000

BETTER EQUIPPED TO STAND ROUGH HANDLING



***Far Stronger Because Made of
EXPANDED STEEL**

A single sheet of steel is carefully stamped and expanded by special process, forming a network of thousands of interlocking strands. These, reinforcing one another and carefully crimped, offer maximum resistance to strains from all directions and assure far greater strength than the unexpanded metal alone could provide.

Mail Coupon NOW!

Circular describing the six sizes of NEMCO Expanded Steel Waste Baskets and illustrating them in the seven colors in which they are available, together with prices and full details, sent upon request. After you have read the facts you will not wonder why the St. Louis schools recently bought a whole carload of these baskets.

NO article of school equipment receives more severe treatment than the waste basket. Even the most careful janitor, hurrying to get through with his day's cleaning, bangs waste baskets on the trash bin whenever contents do not come out immediately.

NEMCO Expanded Steel Waste Baskets are exceptionally well equipped to stand this rough treatment. Made of Expanded Steel*—not wicker, fibre, wire or woven-metal fabric—they keep their shape and smart appearance. Bottoms are as sturdy as the rest of the basket, and are made of heavy solid sheets of steel permanently flanged and formed into place.

NO sharp corners to scratch furniture, scrape floors or catch clothing! Smooth tube edges at top and bottom assure complete protection.

NEMCO Baskets hold pencil shavings and other small particles of waste perfectly. A patented exclusive inner steel collar, three and one-half inches high at the bottom, keeps the small pieces of waste from sifting out.

SIX sizes—12", 14 $\frac{1}{4}$ ", 17 $\frac{1}{2}$ ", 24", 27" and 30" high. A basket for every requirement in the classroom, domestic science department, manual training department, lavatory, school office and for the janitors and engineers.

SEVEN colors—mahogany red, olive green, blue, mandarin red, white, canary and jade. Choose color to suit the decorations of the room! A high grade of enamel is used and it is thoroughly and carefully baked on to hold its lustre for many years.

REASONABLY priced—Thanks to the economies of large scale manufacture, Nemco Baskets cost no more than ordinary containers which lack Nemco features of strength, economy and attractiveness. Prices and full details on request. Mail coupon.

NORTH WESTERN STEEL PRODUCTS CO.

Also Makers of Steel Lockers, Steel Shelving
and Steel Storage Cabinets.

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Chicago, Ill.

NEMCO EXPANDED STEEL WASTE BASKETS

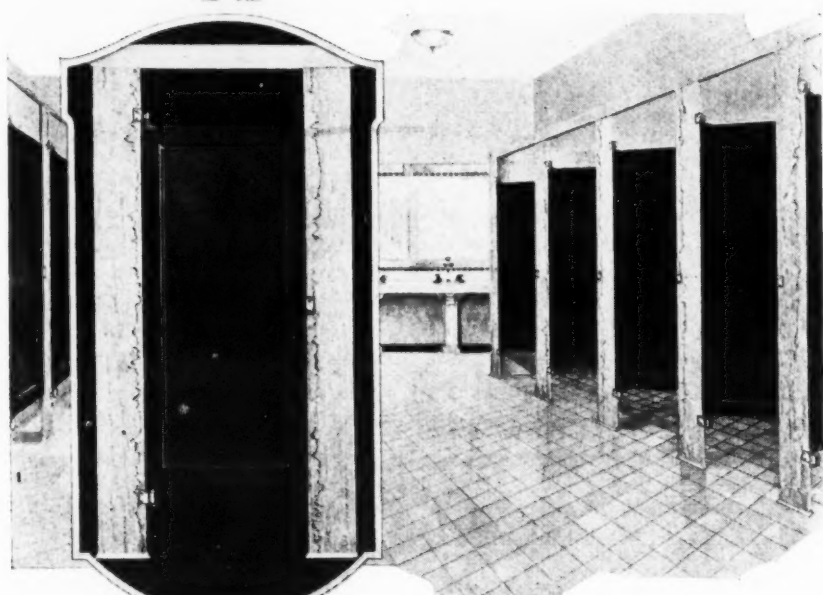
North Western Steel Products Co.,
Dept. A-930, 4545 West Homer St.,

Gentlemen:

Please send circular illustrating Nemco Expanded Steel Waste Baskets.
(Please print name and address.)

Name
Title
Street
City
State

The Touch of Distinction



THE final touch of distinction in that school building of superior design is the new METALUNIT, to be used on lavatory stall partitions of marble, vitrolite, glass, slate, alberene stone, terrazzo, etc.

A METALUNIT is a combination of a flush or panel type door with complete set of hardware including the exclusive Weis Universal Gravity Hinge. Special reinforced construction assures many years of service through the most severe strain.

METALUNITs cannot warp nor absorb odors as do wood doors. They are furnished in many colors to harmonize with the most exacting interiors, and are shipped complete with hardware for installation.

On request, we shall be glad to send a beautifully colored folder completely describing and illustrating METALUNITs.

METALUNIT

HENRY WEIS MANUFACTURING CO., INC.,
Elkhart, Indiana.

(Concluded from Page 116)

City	School Bonded Debt
229. East Cleveland, Ohio.....	3,682,000*
229a. Amarillo, Texas	1,548,000
230. Wilmington N. C.....	(Not reporting)
231. Ogden, Utah	828,000
232. Danville, Ill.	556,000**
233. Lynchburg, Va.	1,044,136
234. Easton, Pa.	2,143,000
235. Hazelton, Pa.	1,502,000
236. Petersburg, Va.	800,000
237. Cranston, R. I.	1,625,500
238. Waterloo, Iowa	(Not reporting)
239. Meriden, Conn.	1,158,000**
240. Waltham, Mass.	(Not reporting)
241. Lewiston, Me.	80,000
242. Orange, N. J.....	1,522,000
243. Clifton, N. J.....	2,140,000
244. Amsterdam, N. Y.....	1,348,200
245. Norristown, Pa.	(Not reporting)
246. Warren, Ohio	2,397,302
247. Green Bay, Wis.....	(Not reporting)
248. Colorado Springs, Colo.....	1,122,000*
249. Revere, Mass.	(Not reporting)
250. Elgin, Ill.	200,000
251. Auburn, N. Y.....	48,000
252. Moline, Ill.	550,000**
253. Sheboygan, Wis.	390,000
254. Irvington, N. J.....	2,898,150
255. Anderson, Ind.	(Not reporting)
256. Cumberland, Md.
257. Montclair, N. J.....	4,984,500**
258. Watertown, N. Y.....	1,130,500
259. Marion, Ohio	967,000
260. Oshkosh, Wis.	638,000
261. Muskogee, Okla.	1,005,000
262. Port Arthur, Texas.....	2,228,000
263. Steubenville, Ohio	974,750
264. Mansfield, Ohio	1,293,000
265. Plainfield, N. J.....	2,282,000
266. Alameda, Calif.	1,547,467*
267. Kearny, N. J.....	(Not reporting)
268. Fort Smith, Ark.....	978,000**
269. Asheville, N. C.....	3,025,000**
270. Hagerstown, Md.	1,381,000**
271. Middletown, Ohio	1,966,000

City	School Bonded Debt
272. Sioux Falls, S. Dak.....	1,357,000
273. Rome, N. Y.....	924,000
274. Raleigh, N. C.....	(Not reporting)
275. Richmond, Ind.	691,000*
276. Clarksburg, W. Va.....	130,000**
277. Great Falls, Mont.....
278. Norwood, Ohio	1,070,500
279. Port Huron, Mich.....	755,000
280. Bloomington, Ill.	(Not reporting)

GROUP V

Population 30,000 to 50,000

281. Newark, Ohio	\$
282. Zanesville, Ohio	926,996
283. LaCrosse, Wis.	734,000
284. Newburgh, N. Y.....	(Not reporting)
285. Norwalk, Conn.	(Not reporting)
286. Nashua, N. H.....	622,500

*Amount estimated.
**Figures supplied from information obtained directly from the school system by the SCHOOL BOARD JOURNAL, July 1, 1930.

CHICAGO CORRESPONDENCE

On August 1 the Chicago board of education elected officers for the ensuing year, breaking a deadlock of three months' standing. Mr. Lewis E. Myers was chosen president, to succeed Mr. H. Wallace Caldwell, the 35-year-old president of the past two years.

Mr. Myers has an impressive record of public, quasi-public, and big-business experience. He is the organizer and president of The L. E. Myers Company, builders and operators of public utilities. He is president of fourteen business firms, mainly utilities companies, and is president or director of half a dozen civic and betterment associations. Just recently the president served on the Citizens' "rescue" committee, which secured pledges of \$74,000,000 for underwriting the continued operation of the local Chicago governments and sponsored a revenue relief program of 31 bills passed by the Illinois General Assembly.

In his "inaugural address," President Myers enumerated two principal planks proposed for his administration. He indicated the intention of ask-

ing the legislature for more building-fund revenues to reduce the huge shortage of seats, and called for an economy régime as to other expenditures.

Mr. Caldwell, who is still a member of the board of education, was not given the chairmanship of any committee, although he was assigned membership on two committees and made vice-chairman of one of them. The new committee chairmen are as follows:

Finance, James A. Hemingway; Buildings and Grounds, Carter Blatchford; Purchases, Walter Brandenburg; School Administration, John A. English; Rules, James Mullenbach; Health and Sanitation, Mrs. W. S. Hefferan.

The Chicago board of education consists of eleven members, each of whom is nominated by the Mayor and approved by the City Council for a fixed term of five years. At the present time there is one vacancy, and two trustees are "hold-over" members, subject to immediate retirement upon the naming of their successors. If new members are not named, the city administration may be more certain of retaining control of the board of education, on any particular issue which may arise.

The 1930 school-building construction program was submitted to the board of education by Supt. William J. Bogan on July 18. The superintendent's recommendations consisted of seventeen projects, requiring approximately \$18,000,000 to complete.

The largest project is a 4,500-student-capacity junior college, to be erected on a 25-acre site on the west side. The list also includes three 1,600-pupil-capacity senior high schools, a 1,600-pupil-capacity junior-senior high school, three senior-high-school additions, a 1,600-pupil-capacity junior high school, a 1,200-pupil-capacity junior high school, two junior-high-school additions, a special truant school for boys, three elementary schools and one elementary branch school.

This program, which represents 20,400 new seats, is classified as follows:

Junior college.....	4,500 seats
Senior high school.....	7,350 seats
Junior high school.....	5,000 seats

(Concluded on Page 120)

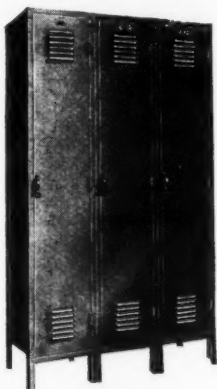
THE CATHEDRAL LATIN SCHOOL OF CLEVELAND INSTALLS 1200 *BERLOY Lockers in Their New School*

"The decision to select your product was made only after thorough study of its merits and record of service. With 1200 red-blooded boys in our school, we do not expect lockers to have an easy life. Our investigation has satisfied us, that your lockers will fully live up to our expectations, and we can say that thus far in appearance and performance they leave nothing to be desired."

The experience of Cathedral Latin so well expressed by President L. A. Yeske, S.M., in the above extract from his letter, is typical of well known schools nationwide.

Thousands of installations, some in every state of the Union, prove the economy of BERLOY Lockers.

The more thoroughly you investigate the locker situation—what you



expect in lockers and what BERLOY offers you—the more probable your decision, also, will be for this popular locker.

Before you buy, be sure that you have an estimate on BERLOY Lockers.

THE BERGER MFG. CO.
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Branch Offices at:
New York Boston Chicago Minneapolis
Philadelphia Cleveland St. Louis
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Export Department, Canton, O.

HERE ARE SOME BERLOY INSTALLATIONS

Benjamin Franklin Junior-Senior High School, Rochester, N. Y.
Architects, Gordon & Kaelber.
Von Steuben High School, Chicago, Ill.
Architect, Paul Gerhardt.
Madison School, Pittsburgh, Penna.
Architects, Thomas Pringle & Oliver J. Robling, Associated.
Harry Burns School, Detroit, Mich.

Architects, Burrowes and Eurich.
Pulaski Heights Junior High School, Senior High School and West Side Junior High School, Little Rock, Ark.
Architects, Thompson, Sanders & Ginnochio.
Senior High School, Uniontown, Penna.
Architect, Emil R. Johnson.
Eastern Junior High School, Lynn, Mass.
Architect, Chas. L. Betton.

Euclid Shore High School, Cleveland, O.
Architects, Fulton & Taylor.
Sweetwater Union High School, National City, Calif.
Architects, T. C. Kistner & Co.
Phyllis-Wheatley School, Houston, Texas.
Architect, Harry D. Payne.
Beaumont High School, Beaumont, Texas.
Associate Architect, Harry D. Payne.



Select yours
from these
22



LUNT & HALEY

- ☐ 1 Air and Oxygen
- ☐ 2 Carbon Dioxide
- ☐ 3 Breathing and Ventilation
- ☐ 4 Fuel and Fire Kindling
- ☐ 5 Draft Control and Combustion
- ☐ 6 Fire Prevention and Fire Extinguisher
- ☐ 7 Heat—Expansion and Conduction
- ☐ 8 Convection and Radiation
- ☐ 9 Hydrogen and Composition of Water
- ☐ 10 Ice, Steam, and Boiling Water
- ☐ 11 Density, Purification, and Water Supply
- ☐ 12 Temperature, Air Pressure, and Humidity
- ☐ 13 Winds and Weather Observation
- ☐ 14 Food, Diet, and Digestion
- ☐ 15 Leaves, Flowers, and Plant Study
- ☐ 17 Yeast, Mold, and Bacteria
- ☐ 19 Constellation and Star Study
- ☐ 21 Magnets and Magnetism
- ☐ 22 Electric Bells and Bell Wiring
- ☐ 23 Cells, Storage Battery, and Electroplating
- ☐ 24 Current Measurement and Control
- ☐ 25 Electric Motor and Power

GENERAL SCIENCE *demonstration* UNITS

EACH "UNIT" consists of a complete apparatus outfit and two copies of an illustrated teachers' manual. Each unit of work is developed by a series of convincing demonstrations on related topics. The apparatus for each unit is shipped and stored in a portable steel cabinet, thus eliminating the need for expensive storage cabinets. From 10 to 25 experiments are provided for in each unit. Prices range from \$29.00 to \$92.50 per unit. Prices include all needed replacement material for a minimum of five years' use. Check the units which especially interest you and send this sheet to us. Free sample manuals with prices will be mailed at once. There is no obligation.

CENTRAL SCIENTIFIC COMPANY

460 EAST OHIO ST., CHICAGO, ILL.
Eastern Division—79-83 Cambridge A Station, Boston
Successor to L. E. KNOTT APPARATUS COMPANY

(Concluded from Page 118)

Special truant school.....	250 seats
Elementary school.....	3,300 seats

20,400 seats

This program represents a distinct shift of emphasis from elementary to secondary-school construction. During the past five years 71 per cent of all Chicago school-building construction was elementary, and only 29 per cent secondary. In the 1930 program, 87 per cent is secondary, and only 13 per cent elementary. That this new emphasis is justified is shown from the following facts:

1. Between 1925 and 1930 the elementary-school seating shortage was reduced by 35,470 seats, while the senior-high-school seat shortage increased 15,920.

2. Between 1925 and 1930 the change in elementary and secondary school membership were:

Grades	Number of Pupils	Per Cent
1-6	6,206 loss	2.4 loss
7-12	56,645 gain	57.0 gain

Considering the late date at which the program was presented, it is unlikely that contracts on the seventeen projects will be let before the spring of 1931.

Probably no large city in the United States maintains such a high average pupil membership as Chicago. Following are some data on class size:

	Elementary	Junior High	Senior High
Third quartile.....	48	48	40
Median	46	44	36
First quartile.....	43	36	30

This table is interpreted as follows: Twenty-five per cent of the elementary teachers (1,730 teachers) have 48 or more pupils; 50 per cent (2,460 teachers) have 46 or more; 25 per cent of the teachers have 43 or less pupils. Incidentally, 511 teachers have 50 or more pupils per classroom.

In response to a request of Professor N. L. Engelhart, of Columbia University, chairman of the subcommittee on school buildings of the White House Conference on Child Health and Protection, Supt. William J. Bogan has submitted a description of the Foreman Junior High School for listing among "America's Superior School Buildings."

The Foreman Junior High School, a Chicago "type"-school, is U-shaped, with a front depth of 685 feet and wing depths of 268 feet. It is of fire-

proof construction, with steel and concrete frame, and brick exterior. It is three stories in height and has a maximum of 2,250 pupil capacity.

There are 27 classrooms, 24 by 30 ft. in size, with built-in cases recessed in the walls.

The administration suite contains offices for the principal, assistant principal, dean, and vocational adviser, and space for clerks.

The auditorium seats 800 persons and is suitable for public use after school hours.

A boys' gymnasium is 60 by 100 ft., adjoins the

shower and locker room. The girls' gymnasium also 60 by 100 ft., adjoins the girls' shower and locker room.

There is a cafeteria lunchroom seating 500 pupils at a time.

A library seating 120 persons is on the first floor, with an outside entry for use as a branch Public Library after school hours.

The building is heated and ventilated by the straight-blast system for equal distribution of fresh, washed, warm air to all parts of the rooms.



LEWIS E. MYERS (LEFT), NEWLY ELECTED PRESIDENT OF THE BOARD OF EDUCATION, CHICAGO, RECEIVING GAVEL FROM H. WALLACE CALDWELL, HIS PREDECESSOR

Modern furniture for MODERN EDUCATION



H-W Movable Table Desk
with C 2115 F Chair

C 2115 F

C 2115 E

C 2115 D

HERE is a new line of graded furniture correctly designed from a posture standpoint. It is admirably suited to modern school use. Its many features include —

1. Attractive Table Desk with all corners rounded.
2. Desk available in a wide range of heights.
3. A line of graded chairs that accommodates every size of pupil, from kindergarten to college. Tablet arms to match.
4. Selected hardwoods used throughout.
5. Duco finishes for extra wear.
6. Full saddle seats BOLTED to back posts.
7. Heavy box framing on chairs double doweled.
8. Strong, accurately fitted underconstruction.
9. Permits flexible seating arrangements.
10. Lends a UNIFORMLY attractive appearance to modern schools.

It will pay you to investigate this practical new line of Heywood-Wakefield movable school furniture. Any H-W sales office will be pleased to explain and demonstrate in detail.



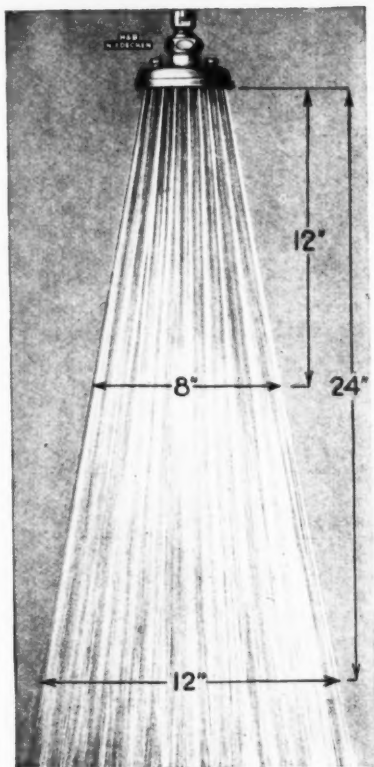
C 2115 FTA

Baltimore, Md.
Boston, Mass.
Chicago, Ill.

Houston, Texas
New York, N.Y.
Seattle, Wash.

HEYWOOD-WAKEFIELD

MAKERS OF PRACTICAL SCHOOL SEATING

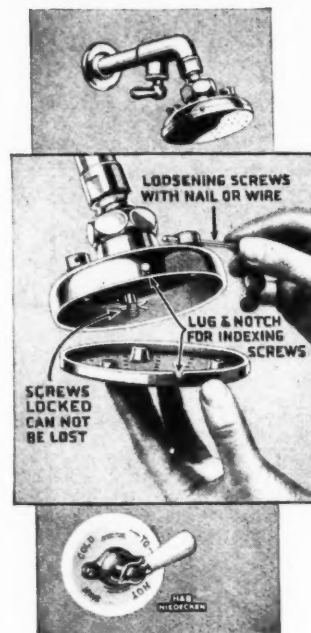


Write now for complete
Niedercken details.

NIEDECKEN SHOWERS

Greater Shower Spray With Less Water Used

The Niedercken Shower Face is radially drilled—which gives a more than usual generous spray and uses less water. Thus a better shower is obtained, with a valuable economy in water and water cost. The Easy-Clean Niedercken Shower Head is another exclusive feature: the face of the shower head is completely removed—as pictured at the right—by simply loosening three screws. After cleaning, face is replaced—a set of notches guiding for correct replacement and alignment as when originally assembled. Install Niedercken Showers for these important reasons: Niedercken Shower, Shower Head, Mixer, Shower Stall complete.



Hoffmann & Billings Mfg. Co.

205 Becher Street
Milwaukee, Wisconsin

School Hygiene and Sanitation

BETTER HEALTH FOR THE SCHOOL CHILD

(Concluded from Page 66)

covered in preceding years. Owing to numerous influences, of which low earning power, and lack of steady employment, are by no means the least, it is a lamentable fact that many a defect discovered takes years to remedy, and some are never corrected. Irremediable defects are counted as corrected, when all has been done that the status of medicine makes possible.

The health record is a vital part of the scholastic record. Accepting this as truth, we see that the only way to secure a health record with its corollary of health improvement, is by physical examination of the school children. In order to do this properly, it should be carried out by a professionally-qualified personnel, at a rate of speed which gives volume sufficient to justify costs, but keeping constantly in mind that quality is the first consideration. That this can be accomplished at an expense which any community may just be asked to bear, is demonstrated by the plan here described. It is not held forth as an ideal. It needs improvement, especially as to provision for increased numbers of examinations. That the needed improvement will come is evidence by the ease with which a fifty per cent increase was obtained, after two years' trial with the original appropriation. The important thing is to build slowly, upon a sound basis of high-grade work, demonstrable benefits, and costs reasonable in the light of advantages

gained. All other benefits will come if these basic attributes are followed.

VENTILATED ROOMS IDEAL FOR CLASSWORK

Open-air classrooms at Decatur, Ill., have been discontinued because, in the opinion of health experts and the school nursing staff, rooms which are mechanically ventilated, present ideal conditions, with more satisfactory temperatures and comfort.

About three years ago, a suggestion was made to the school nurses that better results might be obtained if the windows of open-air rooms were closed and the ventilating system used. Last year, Dr. O. N. Lindberg, medical director for the Macon County Tuberculosis Sanatorium, began a study of the problem. During the year he carried a number of tests by closing the windows in one of the rooms of the Washington School. The results of the tests have borne out his opinions and the present action is the result of his conclusions.

Dr. Lindberg, as a result of his studies, has recommended that, beginning this fall, the three open-window rooms be known as health rooms and that the windows be closed and the ventilating system used. The tests have proved that the children in the one room under observation received the same good health effects as those children exposed to cold air. Other rooms in the school, Dr. Lindberg concluded, would be benefited by the change.

Under the plan, the 75 children in the three rooms will continue to observe the same health routine as in past years.

SCHOOL SWIMMING POOLS

The supervisor of hygiene of the Houston, Texas public schools, Dr. H. K. Read, has devised the

following regulations for the use of school swimming pools of that city:

1. Patrons must take a hot soap shower before entering the pool. Girls and women are expected to take this hot soap shower before putting on their bathing suits. (One cannot take a foot bath with the stockings on, and neither can they take a sanitary shower bath with a bathing suit on.)

2. Patrons using the swimming pool must be free from disease. We call the attention of the instructor especially to the following: "Bad" colds, skin eruptions, boils or sores, inflamed eyes, discharges from ears and nose. In suspicious cases the person must report to the supervisor of hygiene for permit.

3. Persons wearing street shoes will not be permitted on the floor around the swimming pool, except at designated swimming meets.

4. Persons with known heart lesions (bad heart) will not be permitted to swim unless they have a special permit from the supervisor of hygiene.

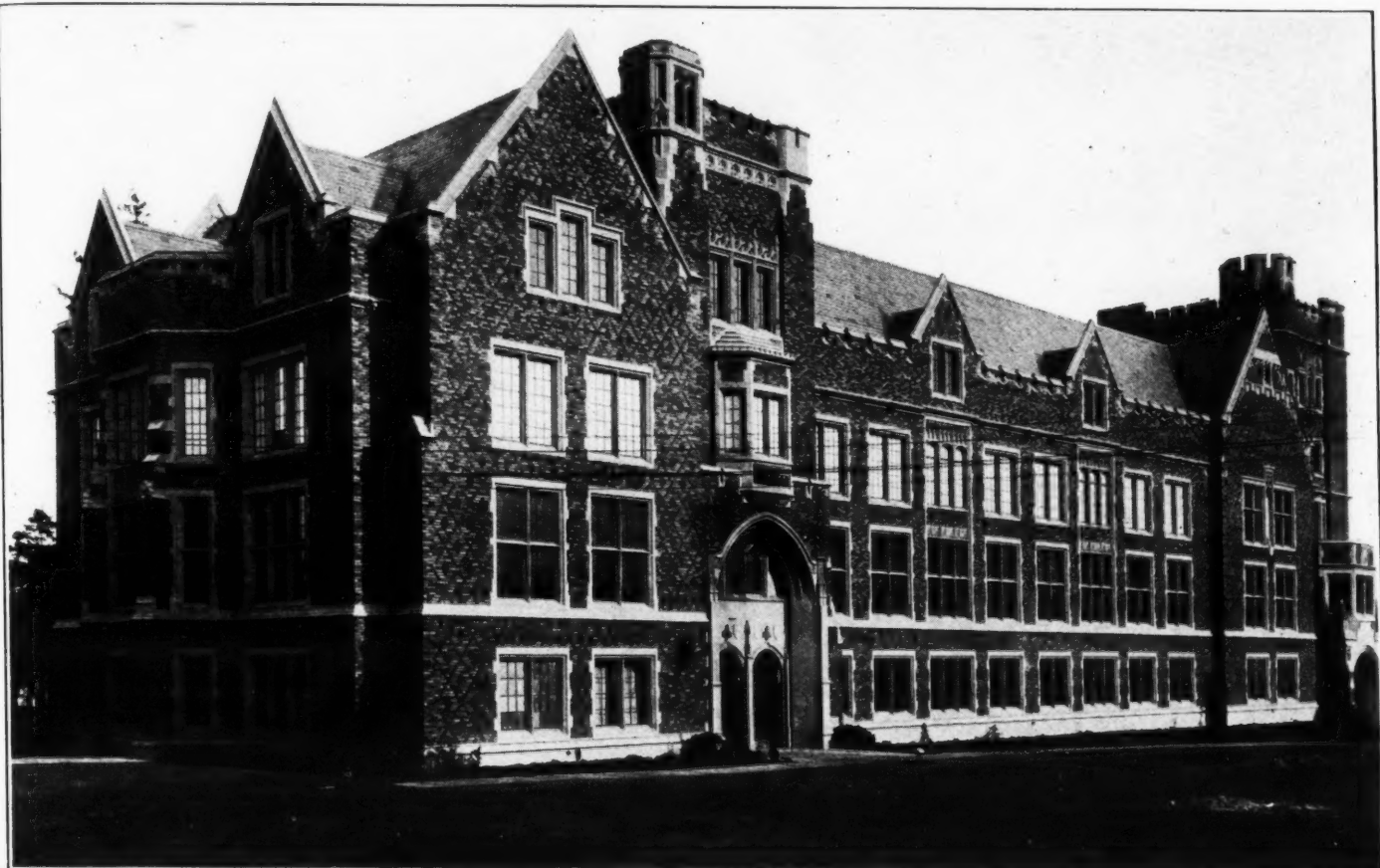
HYGIENE AND SANITATION

♦ The American Federation for the Hard of Hearing has reported that 25 per cent of the children with defective hearing have been restored to normal hearing in a single summer. A summer round-up campaign conducted in 1,520 localities in the United States in 1929 embraced a total of 56,865 children, and resulted in the discovery of 2,110 hearing defects and the correction of 565 of these. It was estimated that a total of 3,000,000 children in the country have hearing defects.

♦ New York, N. Y. With the reopening of the schools in September, the teachers in the various schools were given copies of a pamphlet prepared by the health department as an aid in the detection and prevention of communicable diseases in the classroom. The pamphlet gives a comprehensive description of the symptoms of diseases likely to occur and spread among school children.

The ailments discussed in the pamphlet are chickenpox, diphtheria, German measles, measles, meningitis, mumps, poliomyelitis, scarlet fever, smallpox, tuberculosis, typhoid fever, and whoop.

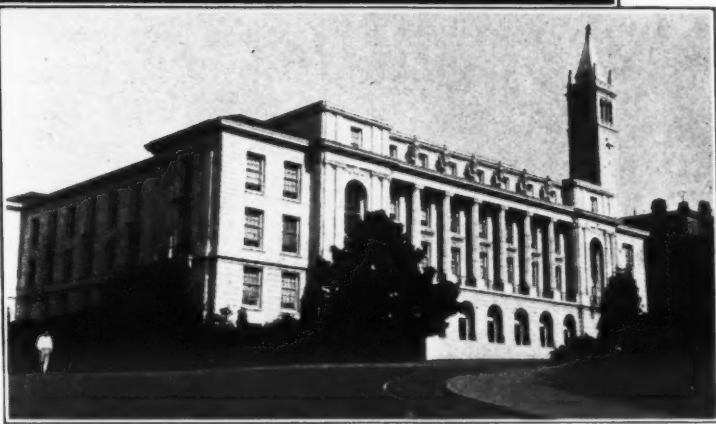
(Concluded on Page 125)



Physics Building,
University of Washington,
Seattle, Wash.
John Graham, Architect.

Life Science Building, University of California, G. W. Kelham, Architect.

Wheeler Hall, University of California, John Galen Howard, Architect.



The New "SF" *Sani-Dri* is the choice of America's leading Schools

Because it fully meets the new code of cleanliness and efficiency for school washrooms, while at the same time doing away with unsightly, unsanitary towels, the new "SF" Sani-Dri is the choice of leading American schools, universities and colleges. This new model, with its 12 important betterments, speeds up washroom drying service and cuts towel costs 60% to 90%. It renders a continuous drying service every day for years, regardless of the budget.

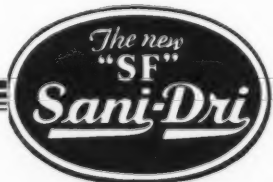
You should consider the new "SF" for your school—study its record of economy and its sturdy, long-wearing, mischief-proof construction—and arrange to secure its satisfying service and worth-while savings for your washrooms.

Complete information about this outstanding new model is found in our new book, "The Airway to Efficiency," a copy of which will be mailed upon request.

Electrical Division

Chicago Hardware Foundry Co.

NORTH CHICAGO, ILLINOIS

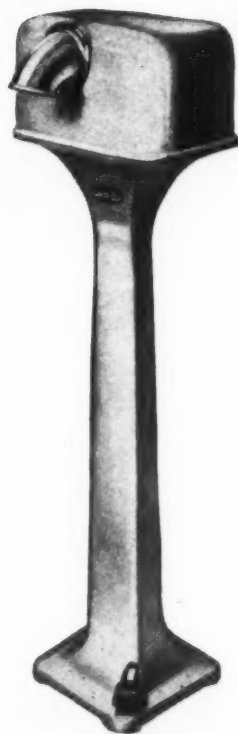


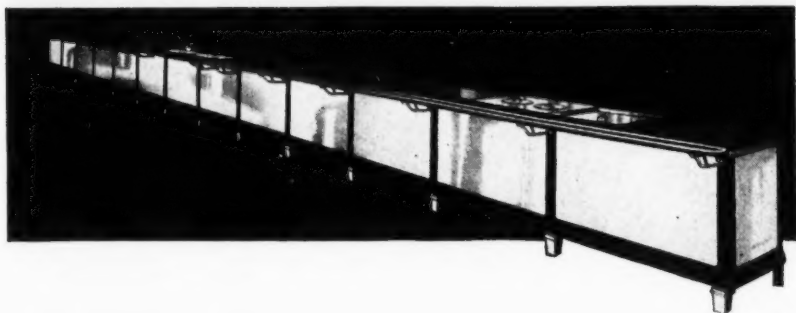
Electrical Division,
Chicago Hardware Foundry Co.,
North Chicago, Illinois

A.S.B.-9.30

You may send me a copy of your new book,
"The Airway to Efficiency," describing the
new "SF" Sani-Dri in detail.

Name
Title
Street Address
City State



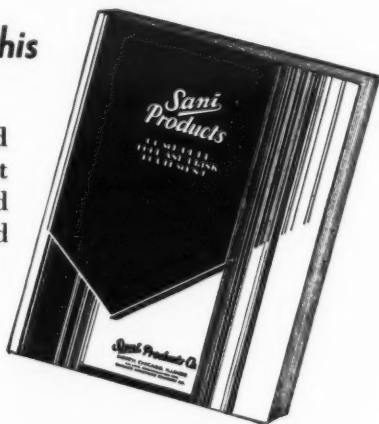


Sani Counters and Tables are used by schools everywhere

In large schools and small schools—in famous schools and others not so well known—throughout the length and breadth of the land, wherever hungry young Americans are served their noonday meal in school cafeterias, Sani Counters and Tables are giving that remarkable service for which they are so well known . . . Not only do they stand up under the strenuous service of school use, but they always retain that quality appearance which is built into them at the factory . . . If you want the best in Cafeteria Equipment you should be sure that Sani Counters, Tables, and other products are installed in your cafeteria.

Why not have a copy of this book handy?

The complete Sani Catalog of Food and Drink Equipment is a book that many hundreds of schools have found to be a valuable reference book and buying guide. If you are not now using it in selecting your needs, why not send for a copy and keep it handy? Just fill out and mail the coupon below.



Sani Products Co.

Sales Organization of Chicago Hardware Foundry Co.
North Chicago, Illinois



SANI PRODUCTS CO., Sales Organization of Chicago Hardware Foundry Co.,
North Chicago, Illinois A. S. B. J. 9-30
Gentlemen: You may send me a copy of your catalog describing and illustrating Sani Counters and Tables.

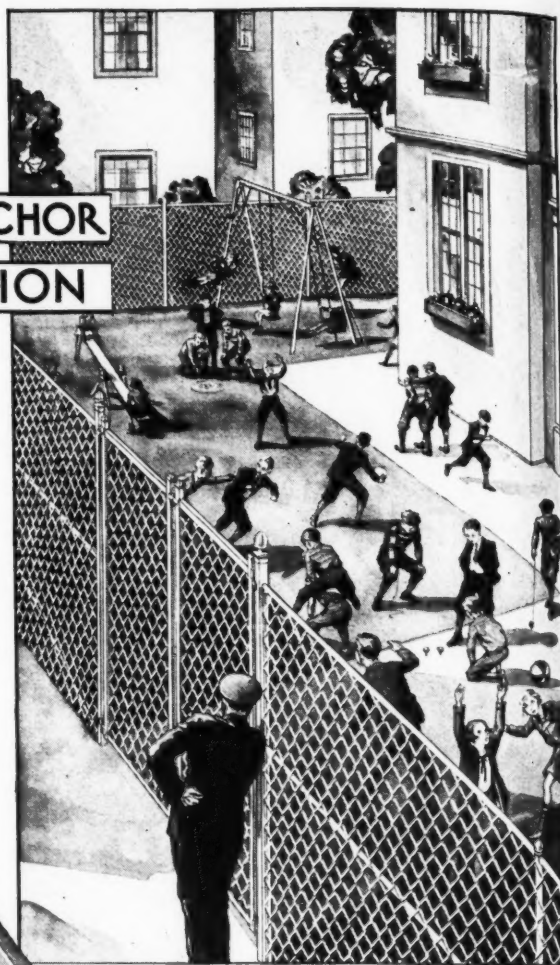
Name

Address

City

State

WITH ANCHOR PROTECTION



RESPONSIBILITY RELIEVED

Recess period! Play-minded youngsters rush to the playground to give vent to their pent-up excess energies. Caution is abandoned. Discipline is inadequate, to stop their racing feet from running into dangerous traffic lanes. Safety must be enforced.

With Anchor Protection, children play in safety. Your responsibility is relieved. An Anchor Fence provides positive protection at the boundaries of your playground.

An Anchor Fencing Specialist is located near you. Just phone or write, and his services will be placed at your disposal. Or, ask for complete catalog of Anchor School Fences.

ANCHOR POST FENCE COMPANY

Eastern Avenue and Kane Street
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New York Philadelphia Pittsburgh St. Louis San Francisco Shreveport

Representatives in all principal cities. Consult your local classified directory.



ANCHOR FENCES

MADE BY THE MAKERS OF AMERICA'S
FIRST CHAIN LINK FENCE



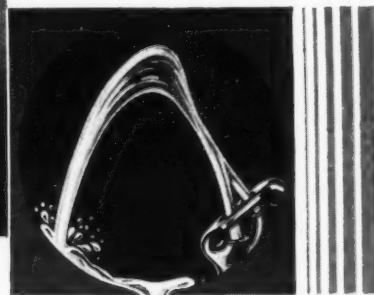
Albion High, Albion, Mich. (Warren S. Holmes Co., Architects) Plumbing Contractor—Bruce Guyselman; Jobber—Galloup Pipe & Supply Co., of Albion

ARCHITECTS and school officials know that drinking devices in schools are of paramount importance—they must be sanitary and give an assurance of dependable performance without the necessity of frequent servicing. The specification for sanitation—Halsey Taylor Drinking Fountains—is a definite guarantee of reliability and satisfaction.

HALSEY TAYLOR *Drinking Fountains*



No. 616



Safe Under Every Condition

Distinguished not only in design but in performance—Halsey Taylor Drinking Fountains provide a degree of health-safety not obtainable in any other make. The side-stream is always at uniform height regardless of pressure variation, due to automatic stream control. Distinctive two-stream projector gives a further feature of sanitation!

(Concluded from Page 122)

ing cough. A section of the pamphlet is given over to a description of the diphtheria prevention campaign, the statement being made that more than 750,000 children in the city have been inoculated.

♦ Mansfield, Ohio. Preschool clinics were conducted in the schools previous to September 1, under the direction of the local health commissioner. The clinics were intended to reveal defects in children before they entered upon their classes at the opening of the school term.

♦ The board of education of McGill, Nev., under the leadership of Dr. Ontie Hovenden has introduced a comprehensive health program in the schools. A regulation attached to the teachers' contracts provides that "Not later than 15 days prior to the opening of school the teacher shall file with the secretary of the McGill school board a certificate from a regularly licensed medical examiner showing the following: (1) General good health and freedom from contagious disease. (2) Evidence of successful smallpox vaccination within the past five years. (3) A negative Schick test for diphtheria, or proof of having taken toxin-antitoxin therefor."

♦ Salem, Mass. The superintendent has been authorized to publish a letter calling on parents to see that physical defects of children about to enter school for the first time are corrected.

♦ The board of education of St. Louis, Mo., by a vote of 8 to 4, has decided to continue compulsory vaccination in the schools.

♦ Fifty-seven per cent of the pupils of the Davenport, Iowa, school children have good teeth according to the results of a health survey.

♦ Elmira, N. Y. A study of the hearing of pupils by the audiometer method has revealed that 167, or 7 per cent, of the 2,215 pupils have defective hearing. If it is found that the hearing of these pupils is far below normal and that it interferes with the progress in schoolwork, parents will be notified and requested to take the children to physicians.

♦ A preventative dental clinic for children 3 to 15 years of age has been opened in the College of Dentistry of New York University. The clinic, which aims to protect the teeth and health of the coming generation, has undertaken a study of the

effects of diet, contracted arches, nasal obstructions, and other mouth disorders on the growth, development, and health of the children. In addition to the dentists and doctors, the staff will include a dietitian, a bacteriologist, and a specialist in children's diseases.

♦ Great Falls, Mont. Dr. T. J. Walker, city health officer, in his recent report, pointed to the marked improvement in the general health of school children. Dr. Walker recommended that the schools make provision for the serving of simple hot lunches, at cost.

♦ The Playground and Recreation Association of America has changed its name to the National Recreation Association. The change in name has been made to make it more appropriate to the activities of the association and to the broadening programs of public recreation in the several communities of the United States. Although the name clearly reflects widespread adult participation in public recreation, the association hopes to do more than before for all that pertains to the play life of the children.

EDUCATIONAL VALUES OF SCIENTIFIC HEARING TESTS

K. P. Royce, New York, N. Y.

A scientific test means a test conducted by methods and apparatus of established accuracy and of sufficient delicacy to detect incipient as well as gross defects. The test must be scientifically conducted under favorable conditions. If such a test is made in a noisy room or under other unfavorable conditions, it is worse in some respects than a test that is frankly an approximation. Conclusions drawn from improperly conducted audiometer tests will show such discrepancies as to cast a shadow of uncertainty on the whole program of deafness prevention.

The most obvious value and perhaps the greatest value of scientific tests is to the deafened school child whose handicap is discovered instead of ignored. No one knows how many school children have been retarded and accused of being dull, when the dullness was in their ears, not in their brain. Ear specialists are pretty well agreed that as many as 80 per cent of the cases of incipient deafness in children can be cured or arrest-

ed if treatment is instituted promptly and carried out faithfully.

Statistics indicate that there is three times as much repetition of grades among slightly deafened children as among those who have normal hearing. Each repetition of a grade is an expense to the taxpayers; if we discover these children whose failure to hear perfectly is keeping them back we can eliminate much of the expense due to retardation. It is conservatively estimated that if one half of the repetitions due to deafness can be eliminated, the savings will run from \$500 to \$1,500 per thousand children per year.

The great majority of deafened adults are either definitely handicapped and unhappy in their social life, or have won happiness through their own strenuous efforts. Eighty per cent of them could have been spared their handicap, had it been discovered and treated early enough.

I plead, therefore, for tests made by such means, and under such conditions, that scientific accuracy results, and for an intensive program of treatment of every case discovered.

PERSONAL NEWS

♦ MR. D. F. DICKERSON, of Clinton, Iowa, has been elected superintendent of schools at Winona, Minn.

♦ MR. PAUL YOUNG, of Greeley, Iowa, has been elected superintendent of schools at Lamont.

♦ MR. GUY WHITEHEAD, superintendent of schools at Lexington, Ky., died at Louisville on August 1, after a brief illness. Mr. Whitehead who was 39, was a graduate of the Murray Teachers' College and held a degree from George Peabody College. He had been superintendent at Lexington since 1929.

♦ The citizens of Homer, Nebr., at a recent election, voted to retain SUPT. C. H. ADEE for the next year. The board members had been unable to reach a decision on the matter of the reelection of Superintendent Adee after five years of service.

♦ DR. R. B. DUGDALE has been reelected a member of the school board at South Bend, Ind. Dr. Dugdale has served as a member of the school board for twelve years, and is beginning his fifth term, or thirteenth year of service. During the past twelve years he has been president for nine years, and secretary for three years.

Handling the Transportation Problem

J. E. Walker, Superintendent of Schools, Hamilton County, Tennessee

The problem of transportation of school children is an outgrowth of the attempt to equalize educational opportunity by the consolidation of schools. During the past decade, students of education found that the children of the one-room school were not securing the advantages enjoyed by children in the schools where the numbers were sufficient to afford a teacher for each grade with sufficient equipment and such housing facilities as would insure the maximum educational growth possible. Consequently, a wave of consolidation of the smaller schools into larger centers swept over the country and is still in progress. At the present time, more than three million of the 27 million school children of the United States are being taught in consolidated schools, and more than thirty million dollars are being spent annually for transportation. The number of one-room schools is growing smaller and the number of consolidated schools is growing larger each year, as the improvement in public highways progresses throughout the country. During the past year, 80 consolidated schools were established in Tennessee, making a total of 881 in this state.

Consolidation of schools and transportation of pupils go hand in hand, and the courts in the various states have, with little variation, given legal sanction to the policy of spending money derived from school taxation for transportation of pupils.

The legislation on this subject in Tennessee is permissive rather than mandatory and permits the school boards of the state to exercise their discretion in consolidating schools and in transporting pupils. The boards may also exercise their discretion in purchasing transportation equipment, or in contracting with persons, who own equipment, for transportation of pupils.

Costs and Results of Consolidation

During the past year, the average number of pupils transported daily in this state was 27,537, at an average monthly cost per pupil of \$2.56. The average monthly cost, per pupil, ranges from 54 cents in Cocke county, to \$5.77 in Montgomery county. The average number of pupils transported daily in the former was 213 in 2 trucks, while in the latter, it was 13 in one truck. Hamilton county transported a daily average of 2,054 pupils in 3 wagons and 63 trucks, at a monthly pupil cost of \$2.27.

No claim is made that consolidation and transportation of pupils can be effected at less cost than the operation of the one-room schools, but the claim is made, and is verified by the standard tests of the achievement of the pupils, that the results far outweigh the difference in cost in the two types of schools. Consolidation of the weaker schools into larger units, the lengthening of the school term, and the raising of the level of teacher qualification have, doubtless, done more toward equalizing educational opportunity of rural children than any other factors.

Factors Retarding Consolidation

The two factors that retard consolidation and transportation more perhaps than any other, are lack of adequate public roads and the conservatism of patrons. It is this conservatism which is behind protests against "tearing up the school" in particular community, which fears the reduction in farm values and anticipates the exposure of children to accident hazards.

Lack of roads is the most serious problem in many counties where consolidation of the smaller schools would greatly improve the school situation. Hope may be found in the fact that the state is now assuming responsibility for the expense of the main thoroughfares in the various counties, and the local highway commissions are now better able to improve other roads over which the school trucks must travel. Hamilton county is fortunate in that the policy of the local highway commission is to give first consideration to the roads over which school trucks are operated. This policy has made it possible to transport school children on trucks on all routes except 2. Only 2 one-room white schools remain for lack of roads to effect consolidation. There is reason to believe that the highway commissions in most of the counties would adopt a similar policy, if they can be impressed with its value by the school administrations.

But lack of good roads should not delay consolidation, where necessary. Many counties begin transportation by using school wagons with a capacity of 15 to 30 pupils; and as the road conditions improve, change to trucks. School wagons can usually pass over any road that permits ordinary horse-drawn vehicles to operate. Such means of transportation is efficient where the number of pupils is small, and where the length of the route is from 3 to 4 miles. Frequently, the wagon can be operated at much less cost than a truck, depending, of course, upon the length of the route and the number of pupils carried. The truck is more comfortable, saves time, and can cover as long a route as is desired. It is necessary for the county to own the school wagons and to contract with the owner of a team to transport the pupils, since the wagons cannot be used for other purposes. Such wagons are inexpensive when compared to the price of trucks. Often an ordinary wagon is fitted with a suitable body and gives satisfactory service.

The second factor interfering with consolidation and transportation is the opposition of the patrons. This can often be met effectively through a campaign of information by which the advantages of the larger school unit are clearly shown. Public meetings in their communities with full, free discussions, with comparisons of the achievements of pupils in the different types of schools, will contribute much in changing the attitude of the patrons on this question. It is necessary to secure the approval of, at least, a majority of the patrons to effect a consolidation lest the proposed advantages be outweighed by the antagonism engendered.

Preparing Transportation Rates

Once consolidation and transportation are determined upon as a policy, the school route should be laid out to insure the best service possible for each child to be carried. Some of the pupils may be required, if need be, to walk a reasonable distance to the truck route, if in so doing the interests of the entire group will be served. Routes should be established so that the pupils will not have to leave home unreasonably early, nor return unreasonably late, nor wait long periods at the school for the truck. These factors contribute largely to the unpopularity of school transportation. The routes should be planned to afford the

children the maximum service of regular, punctual, safe, and comfortable transportation.

The most common dissatisfaction arising from the transportation service comes from those whose children must walk some distance from their homes and wait by the side of the road in the rain or bitter cold, until the truck arrives. Where such a condition cannot be otherwise relieved, it is often necessary for the school board to erect shelters. No transportation system should permit the children to be exposed to weather conditions that endanger their health. Where pupils must wait after school for the truck the principal or teacher should be required to supervise them and see them safely and orderly loaded. Where the pupils must be brought to school earlier than the regular opening hour, so that the truck can go for other pupils, the principal or teachers should be required to be there at the time to receive them.

The equipment whether owned by the school board or by a contractor, should be adequate to accommodate the pupils on the school route so they may not become overcrowded. A minimum capacity of 30 pupils is required in many places, and as much larger in proportion to the number to be transported and the condition of the roads over which the truck is operated. The truck bodies should protect the pupils from the weather and should provide for all pupils to ride inside. A rear door for emergency escape in case of fire is an important requirement, as well as a convenience for the driver in observing the road behind the truck. A requirement should be made for keeping the truck in good mechanical condition, and for safety inspection by competent persons.

Rules Governing School-Bus Operators

The operator of a school truck should serve under written contract, the terms of which he clearly understands. All of the duties and responsibilities should be set out in specific terms so that there may be no grounds for misunderstanding or disagreement.

The contracts under which the transportation is carried on in Hamilton county include the following:

1. Designation of exact route with provision for changes in such route during the life of the contract if the school board deems them necessary for the interests of pupils.

(Concluded on Page 128)



OFFICE OF SUPT. FRANK L. SMART IN THE SCHOOL-ADMINISTRATION BUILDING, DAVENPORT, IOWA

Through a most regrettable error this interesting view of Dr. Smart's office was mislabeled in the August issue of the JOURNAL.



He Took Up the Draftsman's Pencil to Battle Constipation

The daily output of a lathe operator drops. A child grows listless and inattentive as the school day drags into afternoon. An office worker slumps idly at his desk, neglecting the work before him.

The boundless energy that drove a business genius to the top rung of the ladder, slips silently away, leaving only a dull clod of a mind and body.

Yet doctors tell us that constipation is really nothing but a habit—or rather the lack of one. It is a chronic disorder, of millions, induced by irregular evacuation during youth.

The Clow Soldier of Sanitation took up the draftsman's pencil to fight this enemy of modern man and industry.

His first attack was for the coming generation. It resulted in a closet bowl, efficiently designed to make evacuation easier and more certain for school children.

For many years careless designers had been inflicting high bowls upon children in school toilet rooms.

The seat of the Clow Bowl was lowered, 2 inches closer to the floor. The position of the child is

natural, with knees high and stomach muscles relaxed. Thus by making evacuation easier, regularity is made more of a habit.

Following this first bowl have come others on the same idea to help grown-ups in all walks of life.

And the Soldiers of Sanitation score another important victory in their battle against uncleanness, pollution, ill-health and inefficiency.



The Clow Soldier of Sanitation is a specialist on the acute problems of sanitation that confront every builder of a school, hospital, industrial plant or other public building. At his finger tips is the accrued experience of Clow's 52 years experience—at his back the complete line of fixtures to meet every mass plumbing need. Call him in. This is Frank O. Tintoff, Peoria, Ill.—Southern Illinois Territory.

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CRANE

FOR BY PERFECTING EACH UNIT OF THE PLUMBING INSTALLATION TO A POINT WHERE ITS SERVICE IS UNERRING, CRANE CO. HAS FACILITATED FOR CHILDREN THE FORMATION OF HABITS OF CLEANLINESS AND SELF-RESPECT.

(Concluded from Page 126)

2. Drivers must be at least 21 years of age, sober, reliable, careful, of good reputation. They must abstain from use of tobacco while enroute.

3. Drivers must maintain good order on the truck, put off the truck continuous disturbers, reporting same to principal of school. They must not carry passengers other than pupils when enroute with pupils.

4. Drivers must maintain regular schedules, stop, look, and listen at railroad crossings, and make weekly reports showing number of pupils transported each day. Each driver is paid only for the days actually served, and must make a \$500 bond to insure fulfillment of contract. Each driver is instructed to assume the attitude and deportment of a teacher, being kind and firm with the pupils, and cultivating the good will of pupils and patrons. All drivers are instructed to begin loading at the end of the route and to take on pupils until the truck is loaded even though they may take on pupils who live a shorter distance from the school than is required to entitle them to transportation, which is two miles.

Routes are established or changed from time to time where a sufficient number of pupils justifies such action. No route has yet been established in Hamilton county for less than 10 pupils; however, fewer than this number are often carried from day to day.

Salaries of Contractors

The salaries of the contractors in Hamilton county vary from \$50 to \$120 per month, depending upon the length of the routes and the number of pupils carried. In 1929, it became necessary for the board of education to require heavier trucks on many routes. To effect the change the proposition was made to such operators as would replace their 1-ton trucks with new 1½-ton trucks to give them 2-year contracts as a protection against loss. This resulted in changing 42 of the 63 trucks to new 1½-ton trucks.

It would appear at first thought that the small salaries which Hamilton county is able to pay for

this service would not justify truck operators to enter into contract in which they must furnish equipment, drivers, gas, oil, licenses, and repairs. It has been observed, however, that many of the operators are men who could not make as much in other lines of work. Others have business at one end of their routes which gives them profitable employment during the day; and still others use their trucks for other purposes from which they derive additional income. Seldom, if ever, is it necessary to seek persons willing to transport the pupils. No other public service in Hamilton County affords keener competition for employment. Usually there are many applicants for each position and each applicant pleads his claim for preference and brings all the pressure he is able to command upon those having the power of appointment. Doubtless there are many who through eagerness to secure this type of employment would take a contract at a lower amount than is being paid, but the school board, using the average per capita cost as a basis, hesitates to award contracts that would result in losses to operators.

It is the purpose of the department of education in Hamilton county in the near future to work out a schedule on which to base the salaries of bus operators. This schedule will seek to distribute the transportation expense equitably so that each operator may be paid in proportion to the service he renders. It is desired to work out a schedule on a pupil-mile cost basis. Such a schedule would doubtless avoid the possibility of paying one driver more than is equitable and another less.

Consolidation of small schools into larger units and the safe and comfortable transportation of the pupils offer the best means possible at the present time for giving school children modern educational service. The popularity of this plan depends largely upon the kind of transportation service given by the school administrators. It therefore, behooves educators to study the situation in the various counties and to work out consolidation and transportation plans so as to eliminate the objectionable features, if possible, and to give the best service it is possible to obtain with the funds at their command.

THE IMPROVEMENT OF TRANSPORTATION IN IBERVILLE PARISH, LOUISIANA

One of the problems calling for solution in the rural schools is that of transportation. The administrative procedure calls for the making of contracts with drivers, the adoption of a uniform type of bus, the setting up of a schedule of pay for drivers, and the adoption of a policy governing attendance.

Mr. L. P. Terrebonne, superintendent of the Iberville parish schools at Plaquemine, La., has recently presented to his board of education a new plan governing the matter of transportation.

He suggests that the board adopt a schedule of pay for drivers, based upon (a) average monthly attendance of pupils, (b) distance traveled one way, and (c) type of roads traveled. For example, he would pay \$3 to \$4 per month per pupil of average attendance, up to 15 pupils, adding to this \$2 per month per pupil for the next 10 pupils, and \$1 per month for each pupil in excess of 25. An additional amount of \$2 per month would be paid for each mile in excess of 5 miles traveled one way, and \$1 per month for each mile of unimproved or dirt road traveled one way. Any route of less than 5 miles one way would be paid its fractional part of five.

Contracts should be made with drivers for a period of three years, subject to cancellation in event the contractor fails to perform his duties in every respect.

The board should design and adopt a uniform type of transfer body, varying in length and interior arrangements, according to needed capacity.

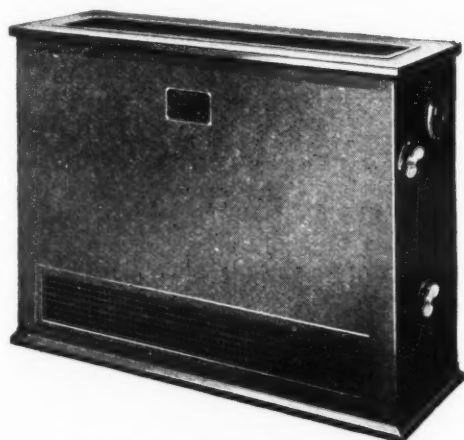
To assist isolated pupils living at a distance from the school, it is suggested that the board adopt a policy of offering 15 to 20 cents per day for actual attendance. This would not apply in any case where as many as 10 children would be brought in on regular transfer routes. It would be used to take care of situations where the number of children is too few to justify the operation of a regular transfer, or where unfavorable road conditions make transportation impractical. It would be understood that the aid is for transportation only.

When

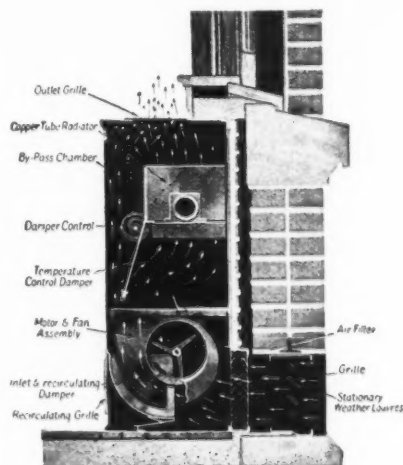


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you really buy *comfort*
and Health



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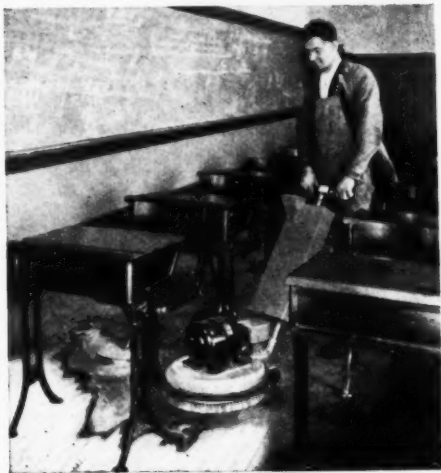
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CONTAINS NO WAX, NO OIL — making it ideal for kindergarten floors especially; no dirt adheres to it, grit doesn't scratch it, scuffing foot wear doesn't affect it—it remains beautifully clear and is readily cleaned with an ordinary mop. Find out its many other equally superior features: sent on request with sample quantity to test and try.

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THE SCHOOL SUPERINTENDENT AS BUSINESS MANAGER

(Concluded from Page 46)

3. The rehabilitation of old buildings in the cities of this study is introduced and completed largely through the efforts of the city superintendent.

4. With the demand for increased efficiency in the work of the clerk of the board, many of the clerical details relating to the business of the board of education have been delegated to the city superintendent.

5. In more than nine tenths of the cities of this study the boards of education delegate the duties of supply commissioner and purchasing agent to the city superintendent. These items of school business management and the instructional program of the schools have become so closely interrelated that supplies and purchases, except for recommendations and reports to the board, are left in the hands of the superintendent.

6. In 97.9 per cent of the cities of this study the superintendents of schools supervise buildings and grounds either directly or through others who are responsible to them.

7. The responsibility for the maintenance of the school buildings in efficient operating condition is centered in the city superintendent in almost four fifths of the cities of this study.

8. Throughout this study it is evident that more of the important business duties of the board of education are delegated to the superintendent in the cities of larger population than to the superintendent in the cities of 2,500 to 5,000.

a) As the work involved in discharging the clerical duties of the board of education becomes more complicated in the larger cities, there is a greater tendency to assign it to the city superintendent.

b) In the construction of new buildings the

superintendent in the cities of Groups II and III exercises more control than the superintendent in the cities in Group I.

c) In the cities in Group I, 23.7 per cent of the superintendents employ and discharge janitors. In the cities in Group III the percentage is 29.5.

d) In the cities in Group I only 36.8 per cent of the superintendents check up and authorize building repairs. In the cities in Group III the percentage is 44.4.

ARKANSAS RISES EDUCATIONALLY

(Concluded from Page 48)

Making the teaching job one which attracts well-equipped teachers, and then making requirements for those positions has been the policy of the state in its improvement program, and there has been as steady an improvement in the teaching personnel as there has been in the teaching plants and equipment. It seems that this problem is much simpler of solution than at first glance appeared.

Arkansas became tired of the place away down on the list to which she had been assigned and "did something about it." And the "something" has proved well worth while. It is giving the Arkansas citizens a basis for some honest state pride in place of the apologetic attitude which he has had for his state. It has brought more advertising of the desirable type to the state than have the summer resorts, scenic highways, industrial development, and other programs of the past several decades. It is something that is permanent, and it has sounded the death knell of the Arkansas "hill-Billy," for with the improved school centers that bring education into the rural communities, no matter how isolated, the picturesque rustic type passes into history and leaves in its stead a progressive, forward-looking, stalwart citizenship.

ELIMINATING THE DEATHBED GAMBLE

(Continued from Page 50)

to be funded. Until there are assets sufficient to meet *all* liabilities, it is obvious that the estates of certain members should not be selected to take out in cash amounts which are not available for all members. Of course, it is possible to include any desired type of benefit, provided either the employer, or the employee, or both, agree to pay the higher rates of contribution. It should be remembered that an actuarial-reserve law provides for a periodical investigation and an increase in rates, if necessary.

Cost of the Substitute Benefit

The panacea for the abuse of Option 1 was the substitution of a new death benefit. A comparison of the Option 1 benefits paid under the New York teachers' retirement law in one month in 1929 with the death benefits paid in one month in 1930 shows a slight decrease in the cost for the death benefits. In April, 1929, the retirement board voted to pay optional benefits amounting to \$175,751; in March, 1930, it voted to pay death-benefits amounting to \$166,555. The report for May, 1930, shows a decrease in the death benefits, as they amounted to \$93,398. Ultimately the death benefit will cost considerably less to New York City than the use of Option 1 as a deathbed benefit, for the largest death benefits are payable to present teachers. It is possible for a present teacher to retire with a total service credit of 35 years and receive a total death benefit of nearly 300 per cent of his average salary. This will not be possible for a future entrant, as the maximum death benefit paid may not exceed 100 per cent of his average salary.

The excessive death benefits possible under the older law have been opposed by the business men of New York. The Merchants Association of New York in March, 1930, sent a memorial

(Concluded on Page 132)

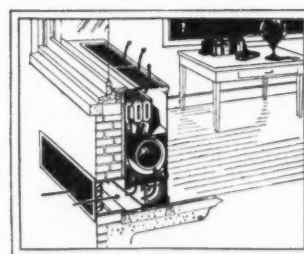


Back to School

... but even indoors
... they can have pure
outdoor air all day long

SUMMER'S happy hunting grounds will soon be empty. Healthy, sun-bronzed youngsters are going back to school. They will miss the day-long sport and exercise, of course . . . but even more they'll miss the bracing outdoor air, if they can't have it. There's no reason why they can't! Classrooms can be filled with pure, summery outdoor air all winter long! Raw January air can be drawn indoors (without opening a single window) . . . filtered clean . . . tempered to mellow warmth . . . then floated quietly into the rooms . . . by Sturtevant Unit Heater-Ventilators. There are no drafts . . . classrooms are never stuffy. Health built up through the summer will be protected through the fall and winter.

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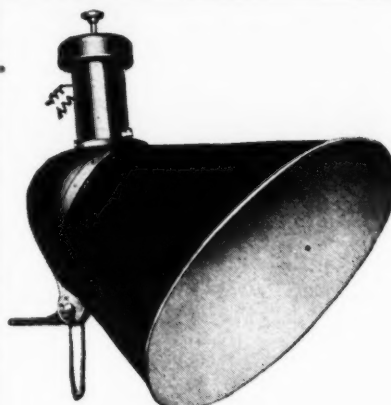
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(Concluded from Page 130)

to the New York Legislature protesting against "pension raids," and "demanding that in the future no special pension legislation be passed without specific information as to its cost and without a direct statement of approval from the city government."

Chance as a Factor

This is the situation in New York City: Suppose a teacher dies *within* 30 days after retirement; then, the death benefit is payable to her estate. But, if death occurs after the 30 days have elapsed since retirement, no death benefit is payable. To meet this situation, New York teachers are urged by their associations to file optional applications which become effective 30 days after retirement.

An element of chance exists in retirement systems with similar optional benefits. Should the member retire without an option, she receives the largest retirement allowance her total reserve will purchase. In case of death after retirement, her estate receives nothing. Besides Option 1, there are Options 2 and 3, either of which provides a certain retirement allowance for a beneficiary named at retirement. But, if the teacher's salary has been small, she may be unable to choose an option to provide for a dependent, as her reduced retirement allowance is insufficient to live with any degree of comfort. This gives the higher paid teacher the chance to choose an option. This problem presents so many phases, that it requires special consideration.

Counting the Cost

To sum up the situation: The primary purpose of a teachers' retirement system is to relieve the educational system of aged and disabled employees, and to assure teachers ade-

quate retirement allowances. It is a matter of vital concern to these teachers that the retirement fund remain solvent. The New York City Teachers' Retirement Fund is able to pay large optional and death benefits to present teachers as the benefits for such teachers are paid by annual appropriations. This is not the case in other state and local retirement systems based on the actuarial reserve plan, as the inclusion of additional death benefits for the use of Option 1 as a deathbed benefit would either raise the rates of contribution or decrease the annuities paid at retirement. It is advisable to consider carefully any amendment to an actuarial retirement law which increases the financial burden. Let an actuary first count the cost.

TEACHER DEMAND AND SUPPLY IN THE PUBLIC SCHOOLS

(Concluded from Page 53)

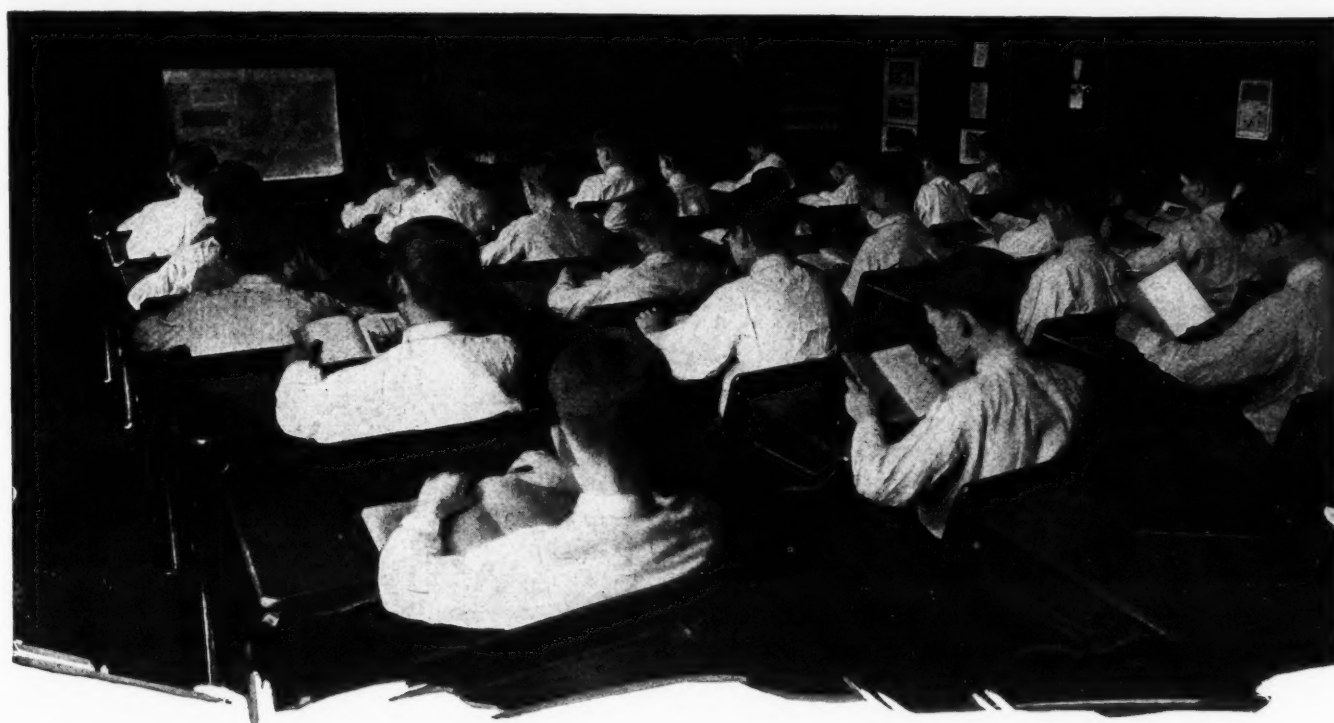
Considering actual teacher needs again, Table II gives comparative figures from Ohio and Wisconsin. If the figures for Wisconsin (item 1) are correct, they represent an ideal situation with less than one third of newly appointed teachers without experience. But the percentage is derived and four or five years old. Notice that more inexperienced teachers were required last year in Ohio than were used three years ago and that proportionately fewer are coming from outside the state. When the per cents of column 3 are compared in Colorado and Ohio (items 2, 3, and 4), the situations are seen to be very similar. In both states, the largest need is for young, inexperienced teachers to fill the annual public-school vacancies. But Colorado receives twice the proportion of outside teachers into her public-school faculties, and but one twentieth of the total percentage of teachers return to teaching after once dropping out.

In general, it may be said that the new teacher need in Colorado is characterized by the usual conditions in a pioneer state. A large proportion of newly appointed public-school faculties are every year entirely without teaching experience. A very small part of all replacements are taken care of by experienced teachers reëntering the teaching ranks. And, if it were not for the fact that other commonwealths are sending into the state a large group of experienced teachers amounting to over one fourth of all newly appointed every school year, the group of teachers entirely without experience would very probably constitute up to at least 90 per cent to 95 per cent of all annual replacements.

A definite checking such as is illustrated in the foregoing is highly desirable in every commonwealth annually. The books of the teacher-making plant must be kept up-to-date, and one indispensable item of information tells the management how many units of the product they must produce during the coming year. It is not good business to have a supply on hand which the market does not demand, nor must needed demand find the supply lacking. The lowest level of efficiency is found, of course, where state authorities do not know anything definite at all about what the supply has been or what the demand will be.

♦ The board of education of Rensselaer, Ind., has been reorganized for the school year 1930-31, with the reelection of Mr. G. O. Bales as president. Mr. D. E. Grow was elected as treasurer, and Mr. C. W. Postill as secretary.

♦ Shelbyville, Ind. The school board has been made the sole distributor of school textbooks for Shelby county. Under the plan in operation, books are sold from the store in the school administration building to the pupils of the city and county schools, at cost.



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IN connection with the planning and installation of the PeerVent System, PeerVent Engineers give every possible service to the Boards of Education, Engineers or Architects. Every installation has individual engineering attention based on PeerVent's long experience, to obtain the lowest cost consistent with economical operation.

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AXIOMS OF SCHOOL ADMINISTRATION

Everett C. Preston, Superintendent of Schools, Johnston, Rhode Island

Although systems of school administration differ widely in the details and techniques of their development, certain basic or fundamental axioms or principles seem inherent in all successful organizations. The following generalizations, developed in graduate study by the author, have been of inestimable value to him in his experience, and are here presented as possible aids to others.

Do

1. Idealize all school procedure.
2. Accept everything that you undertake as a challenge.
3. Use all available resources and search for new resources.
4. Make problems objective.
5. Rely upon sound principles as bases for action.
6. Spend money wisely.
7. Help to create public opinion.
8. Create all possible friendly home contacts.
9. Be the educational philosopher of your community.
10. Get close to the life of the children.
11. Mix commendation very liberally with criticism.
12. Meet opposition in a straightforward manly attitude.
13. Search for outstanding examples of progress.
14. Be cautious in recommendations and promises.
15. Be a good listener.
16. Spend money on leadership.
17. Expect and aid growth in the school staff.
18. Encourage teacher contribution to research.
19. Constantly strive to obtain more money for public education.
20. Unify the organization.

Don't

1. Be autocratic.
2. Permit physical limitations to limit your educational thinking.
3. Have a vacillating policy.
4. Argue.
5. Ignore opposition.
6. Be subservient.
7. Favor personal friends.
8. Detract from teachers' relationships to pupils.
9. Encourage trivialities.
10. Allow schools to become too heavy mechanically.

MAKING A SCHEDULE OF RECITATIONS

(Concluded from Page 56)

fit the work program of these teachers. Every school has special problems like this, which must be met in program building.

Balancing Class Periods

The activity period in the Portland high school comes between the third and fourth periods. It is placed at this particular point, to avoid a conflict with the work of the part-time teachers.

The local school constituency and the size of the town are such that it has been found inadvisable to operate a cafeteria. Consequently, a noon period of 65 minutes is arranged for. It has been found advisable to better adjust the schedule so that students will not have more than two consecutive classes in the same half day. Study periods can thus be arranged so that the students do most of their studying in the building. We have found that the best work cannot be done when students are compelled to sit



PUPILS OF THE HOOVER SCHOOL IN RAPIDAN, VIRGINIA, WITH THE "FIRST LADY"
(Wide World Photo)

two or three successive periods in the study room.

Care is exercised to prevent too many classes meeting during the same period. The classes are evenly distributed throughout the day, so that the study room will not be overcrowded during any period.

Since there are few teachers in any one subject, very little grouping of students according to ability is possible for purposes of instruction. However, the problem is kept in mind and necessarily must be considered by every principal in building a schedule of recitations. Insofar as possible, classes of the same division of a subject are arranged for the same period.

After the entire schedule is satisfactorily arranged, the rectangles of colored paper are removed, and the names of the classes are written on the large sheet of paper or cardboard. The schedule is posted in the office and is discussed with the teachers before it is finally promulgated.

The Preparation of Pupils' Programs

After the schedule of recitations has been completed, the individual programs for students are made. The building of a schedule of recitations is an important task of the high-school principal. Students enter upon the semester's work with a feeling of satisfaction, if they find that their individual programs are well made and their classes evenly distributed. The first day of a semester should run smoothly — as

smoothly as any other day. When the students will get the idea that all is business, they will quickly settle down to work.

THE WASHINGTON SCHOOL, OLYMPIA, WASHINGTON

(Concluded from Page 62)

Play Shed Protects Pupils

A few rods east of the building there is a play shed 90 by 100 ft., with a partition in the middle, to separate the boys from the girls. This structure was made necessary because of the great number of rainy days in western Washington, although the total rainfall is less than in most of the eastern states. The shed is built of wood, with tar-paper roof, and is boarded up on the south and west sides, from which the prevailing winds blow. The ceiling is 13 ft. high.

Two covered passageways connect the play shed with separate entrances to the school buildings, enabling the pupils to pass from one structure to another without intermingling. "Experience indicates," relates Superintendent Breckner, "that two things are essential for an outdoor play shed; adequate drinking fountains and toilet facilities. The former has been provided and the latter are being installed. This prevents children from running back and forth to the school building during recreation periods, which causes confusion and litters up the premises."



WASHINGTON SCHOOL, OLYMPIA, WASHINGTON

Another Indiana School Adopts BUCKEYE HEATOVENT VENTILATION

MAPLE AVENUE SCHOOL, TERRE HAUTE, INDIANA

Architects: George Stoner & Co., Terre Haute, Indiana

Engineer: R. A. Stuart, Terre Haute, Indiana

Heating Contractor: O'Laughlin Bros., Terre Haute, Indiana



Notice the intake openings under the windows in the picture above? That is where the fresh outdoor air is drawn into the class rooms. These openings indicate that the health of pupils and teachers has been given prime consideration by the Architect and the School Board.



See the Buckeye Heatovent under the windows? This unit assures the pupils and teacher, who spend half of their waking hours in this room, of a continuous supply of fresh, blood purifying, properly warmed air.

In the Auditorium it is especially necessary that a sufficient volume of fresh air be supplied, for here will gather a large number of pupils. The larger the number people in a room, the greater the need for fresh, filtered, life giving air.

Fresh Air~ Filtered Air~
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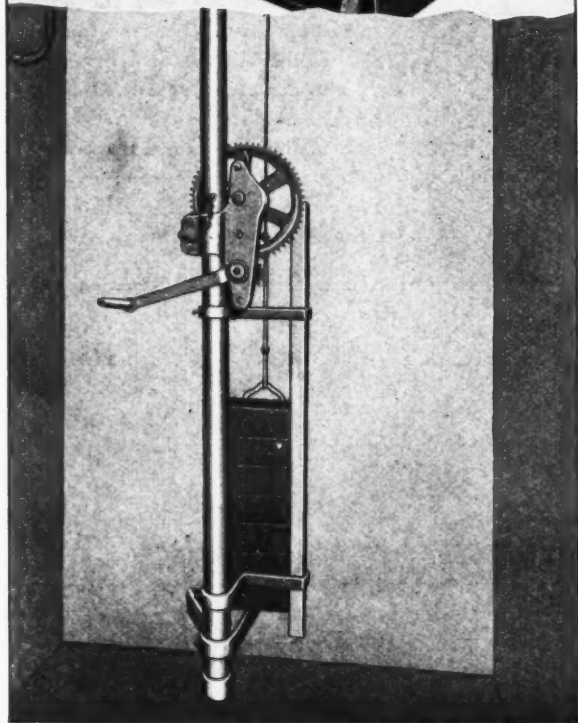
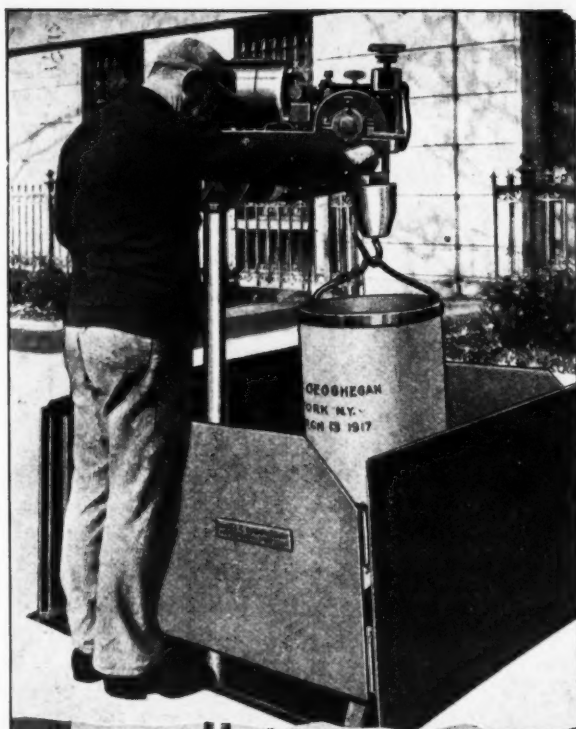
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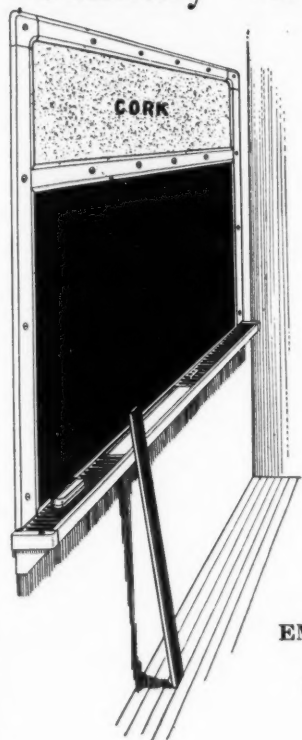
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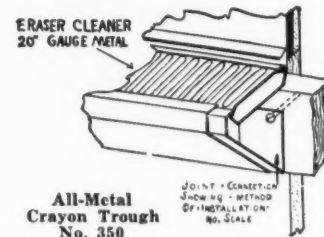
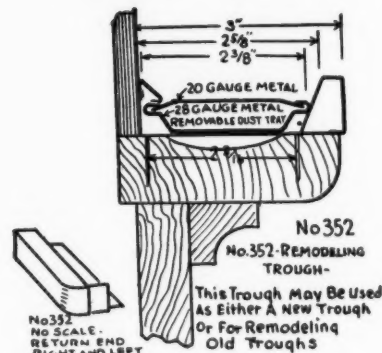
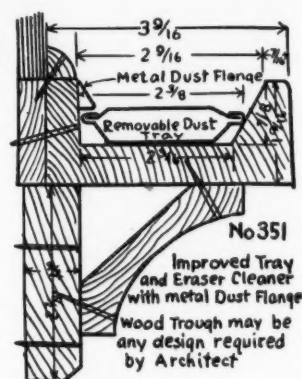
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(Concluded from Page 60)

loading and loading the children without change of level. A waiting room and toilet for the drivers and storage space for wheelchairs adjoins the bus room.

A total of 150 children are accommodated in the unit for crippled pupils and 560 in the grade school.

The building is constructed of concrete, brick, tile, and steel. The exterior is a dignified and pleasing modification of the classic style, in brick and stone.

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The building was planned and erected under the supervision of Messrs. Randall & Vedder, architects, of Syracuse, N. Y.

A BUILDING PLANNED FOR ENLARGEMENT

(Concluded from Page 58)

The building is completely equipped from the mechanical standpoint. Steam heat is supplied and separate fan ventilation is arranged for the auditorium, the classroom section, and the gymnasium so that these parts can be heated and ventilated independently. An electric program-clock system, a complete electric-lighting system, and electric power for the shops and laboratories have been installed. The plumbing is of the heavy-duty school type.

The contracts for the building were as follows: General contract, \$139,973; plumbing and heating, \$27,400; electrical work, \$7,627; architects' fees, \$9,000. The construction cost 22 cents per cubic foot.

The building was designed and erected under the supervision of Messrs. Owen, Sayler & Payson, of Kansas City.

PERSONAL NEWS

♦ The school board of Port Washington, Wis., has reorganized, with the election of Mr. J. E. GILSON as president, Mr. LESTER SMITH as vice-president, and Mr. L. J. LARSEN as secretary.

♦ The school board of Flora, Ind., has reorganized, with the election of Mr. G. W. KENNICK as president, Dr. J. C. SHERMERHORN as treasurer, and Mr. TONY BECKNER, as secretary.

♦ The school board of Rensselaer, Ind., has re-

organized, with the election of Mr. GEORGE BALES as president, Mr. C. W. POSTILL as secretary, and Mr. D. E. GROW treasurer.

♦ Mr. C. V. PEERY has been reelected as president of the school board of Eldorado, Kans. (PERSONAL NEWS OF SUPTS.)

♦ SUPT. F. E. CONVERSE, of Beloit, Wis., has been reelected for his 34th consecutive term.

♦ Mr. DANIEL T. WEIR has been elected assistant superintendent of schools at Indianapolis, Ind.



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THE ADMINISTRATION OF JANITORIAL-ENGINEERING SERVICE — V

(Continued from Page 67)

9. Proper and regular operation of ventilating equipment.
10. Sufficient oiling of proper parts of fans, pumps, motors, etc.
11. The proper storage of coal and wood in bins. In all schools, janitor-engineers should be held responsible for the majority of jobs listed under special work which follow:
 1. Minor repair jobs.
 2. Replacement of broken glass and worn-out window cords.
 3. A good flow of water from faucets and drinking fountains, and into toilet bowls, etc., and keeping drains free from obstruction.
 4. Minor painting and decorating jobs.
 5. Necessary records and reports.
 6. Proper care of grounds as regards cleanliness, surfacing, and attention to vegetation.
 7. General control over the use and abuse of school property, the keys to grounds, buildings, and rooms, and the opening and closing of school buildings.
 8. Supervisory authority over pupils in toilet rooms, at the noon hour, and incidentally at any time during the absence of teachers.
 9. Keeping clocks, bells, and electric batteries in condition for proper use.
 10. Notification of proper authorities of needed major repairs.
 11. Precautions for the prevention of fires and knowledge of what to do in case of fire at school buildings.
 12. Care of the flag.
 13. Acceptance and storage of school and janitorial supplies.
 14. Replenishing of toilet-room supplies.
 15. Lining up of classroom desks and seats and adjusting them to fit children.
 16. Making ink and filling inkwells.
 17. Moving furniture for special programs.
 18. Remaining in the school building during noon hours.

19. Cleaning up messes made by sick children.
20. Care of sand boxes, sawdust, modeling clay, etc.
21. Carrying milk into the building and empty bottles out.
22. Adjusting window shades at night.
23. Acting as a guide to visitors.
24. Carrying books and supplies for teachers.
25. Knowledge and practice of simple principles of first aid.
26. Attendance at building for evening meetings.
27. Placing and removing of window screens and storm windows.
28. Shoveling snow from sidewalks, steps, and fire escapes.
29. Care of the school's house plants during vacation periods.

Summary

1. Certain records should be kept and reports made by janitor-engineers and officials in charge of the service.
2. Requisitions for supplies should originate with the head janitor-engineer, going to the higher officials by way of the building principal.
3. Janitor-engineers should not be given authority to determine the outside use of school buildings.
4. The superintendent of buildings and grounds should make the assignment of service loads and the placement of janitor-engineers, based upon scientific studies of the work involved.
5. Daily, weekly, and yearly work schedules should be made by the head janitor-engineers of each building, subject to revision and suggestion by the superintendent of buildings and grounds or members of his staff.
6. All janitorial-engineering employees should be employed and paid directly by the board of education. The "contract plan" is inefficient and uneconomical.
7. Contracts for services are unnecessary. They make it difficult to discharge an incompetent employee.
8. Unionization of janitorial-engineering employees is undesirable, if it can be avoided.

9. Rules and regulations should be subject to continual addition, elimination, and modification by the superintendent of buildings and grounds, or they may tend to restrict the service, rather than promote it.

10. Janitor-engineers, according to their own statements, work on the average, 12.3 hours per day, and 67 hours per week. These hours may be fewer during a part of the year.

11. It is common practice to give janitor-engineers two weeks' vacation, with pay, during the summer months.

12. Utility men may be used as substitutes or a list of qualified substitutes may be kept by the superintendent of buildings and grounds.

13. School janitor-engineers should be held responsible for numerous cleaning jobs, for proper heating and ventilation of school buildings, and for special work about the school buildings and grounds.

RADIO IN EDUCATION

Educational broadcasting in order to retain its position in the educational field must adopt a future program of action in respect to the allocation of certain channels for education broadcasts, according to a recent statement of Mr. Armstrong Perry, specialist in radio education of the U. S. Office of Education.

The lack of financing and the want of technique in radio broadcasting are given as the reasons for the threatened disappearance of the educational radio broadcasting stations operated by universities. Educational stations, Mr. Perry pointed out, need money to make a thorough study of radio broadcasting technique, with a view of making their broadcasts as interesting as those presented by commercial stations. Educators and those taking part in educational broadcasts must put more time and effort on their programs preparatory to giving them. Mr. Perry believes that in the future such programs will be prepared by specialists in the work. The problem now rests with the educators to work out a policy and a program which will realize the obvious benefits of the educational type of broadcast.

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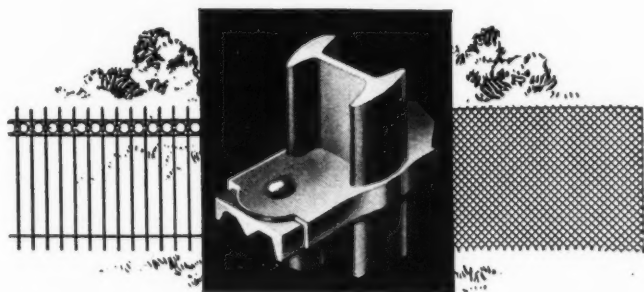
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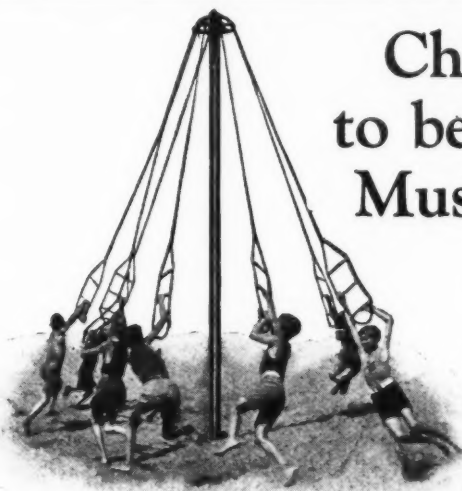
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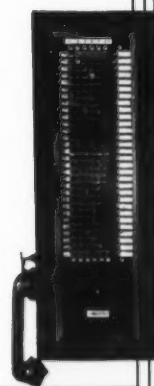
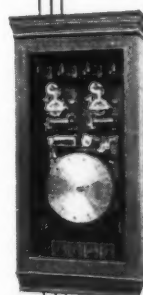
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Book News and Reviews

CALIFORNIA'S STATE PUBLICATION OF TEXTBOOKS

The plan carried on in California whereby that state has published its own school textbooks has been the subject of some debate and discussions. While the state authorities have defended the policy, the same has been discountenanced by educators and disinterested investigators.

The political machinery which has built itself around the scheme, with its attendant patronage and office holders, is well entrenched and therefore not likely to be dislodged very soon. Nor is it deemed expedient to scrap a system which now represents a substantial investment, and which can, at least in part, be defended before an indifferent constituency.

A number of investigations and reports on state publications of textbooks in California have been made by different individuals, committees, and organizations. Committees appointed by the California Teachers Association, legislative commissions, and educational-association committees from Georgia, Colorado, Washington, Virginia, Mississippi, and other states have made investigations.

The latest study made is the work of Percy Roland Davis, Ed. D., and published by the California Society of Secondary Education. The investigator enters with considerable thoroughness the financial considerations involved.

Millions Invested

In entering upon the history of the subject, the report says that California had invested over two million dollars in a state printing plant before the printing of textbooks was undertaken. Prior to 1885 no schoolbooks were printed by the state, and school districts selected and purchased books on the plan of local adoption. Conditions arose which brought about such dissatisfaction that, according to Cubberley, "in an antibook-trust movement which swept the state, and for which publishers' agents were largely responsible, the constitution of California was amended.

Subsequent investments made are discussed as follows:

"However, due to the fact that prices for the books were not fixed sufficiently high to cover all expenses, the state schoolbook fund did not prove adequate, and supplementary appropriations were found necessary. The record of appropriations for the state printing office from 1885 to 1913 shows a total of \$812,354.57 chargeable to the state printing of textbooks. This amount, it appears, was necessary for the maintenance and development of the work of the state printing office over and above receipts from the sale of textbooks and other products. What proportion of this total amount can be estimated as directly due to the extra expense caused by the printing of textbooks seems difficult now to determine.

"An amendment to the constitution, submitted to the people and carried by a large majority in November, 1912, gave the state its present plan of free textbooks. The cost of the books, heretofore borne by the school pupils or their parents, together with supplementary appropriations, has been met since by budgetary allowances. At times these allowances have been sufficient to supply the books needed, and at other times they have not."

The Cost-Accounting Factor

The claim made by the California state printing office is to the effect that the scheme pays

for itself, and permits a 7 per-cent write-off on the investment in property and equipment, is challenged by Brown, Cubberly, Hubbard, Pulsifer, and other educators. In this connection Cubberly says:

"The whole question of costs as brought out by political adventurers in this field is deceptive. They can show you with a pencil that the state printing office at Sacramento can produce the state textbooks, for, let us say, 80 per cent of the retail costs of the same books, bought from the publisher. If we neglect all overhead and developmental costs, which is always done, this probably is about the right figure."

State Denied Best Books

In his summary and conclusion the investigator says: "The evidence produced in this study has shown that under state publication the schools suffer from an inadequate supply of state textbooks, both because of delayed adoptions and of book shortages after adoptions; and that such is not the case under the policy of state purchase. It has also shown that lengthy periods of adoption, averaging eleven years, have been the rule under state printing. It has further demonstrated that a large percentage, probably more than one half, of the books judged by experts and state textbook adopting bodies to be the best produced in the elementary field are not available for state adoption in California.

"In addition, the conclusion has been reached that state printing is a force which discourages the development and production of the type of textbooks which modern education requires; and that the existence of state publication of textbooks in itself brings into play interests influential in its maintenance that are other than educational.

"Since these findings have brought out marked and serious handicaps to the educational system of this state which are not found in other states operating under the policy of state purchase, the answer to the question set as the first part of this problem seems evident: As compared with state purchase of textbooks, state publication provides less educational advantages to the schools."

Actual Cost Not Revealed

"Investigation of the financial phases of state publication has shown that the state cost-accounting system does not include all of the



GOOD-BYE, SUMMER
—New York World.

cost factors involved in the process, and, therefore, that state-fixed prices are neither complete nor final costs.

"For that reason, and since the contract prices of books under state purchase are final costs to the state, valid comparisons of costs of books under the two policies cannot at present be made. Furthermore, comparisons and claims of savings to the state which have been credited to state publication are, aside from the fact that all costs of manufacture are not included in state-fixed prices, based upon the false assumption that books of identical titles may be compared in price when published in different editions, of different mechanical construction and, at times, even of different content. Therefore, for this reason also, these claims and comparisons are invalid and are void of any proof that the policy of state printing provides textbooks to the state at a lower original cost than would state purchase.

"The evidence seems to show that, under equal usage, state-printed textbooks are not serving the schools as long under the policy of state printing as under that of state purchase. Even more conclusive is the showing of a duplication of expenditure of the state for textbooks by a majority of the school districts of the state in order to provide the same educational service to the schools which the state textbooks are intended to provide.

"Because of long adoption periods rendering state textbooks obsolete, because of delayed adoptions, book shortages, limited field of selection of textbooks, and other educational disadvantages, the local districts have been compelled, in justice to the pupils for whose educational progress they are responsible, to make up for the educational deficiencies of state printing by the expenditure of local funds which are intended for other purposes. Theoretically, the district library fund should be spent for bona fide reference or supplementary books to enrich the course of study, books not strictly of the textbook type. Actually, as shown by the results of this inquiry, a large part of this fund is used for textbooks considered better or more suitable than the state texts. In the meantime, the state texts have received comparatively little use, in many cases only such use as would comply with the letter of the law."

No Economy Effectuated

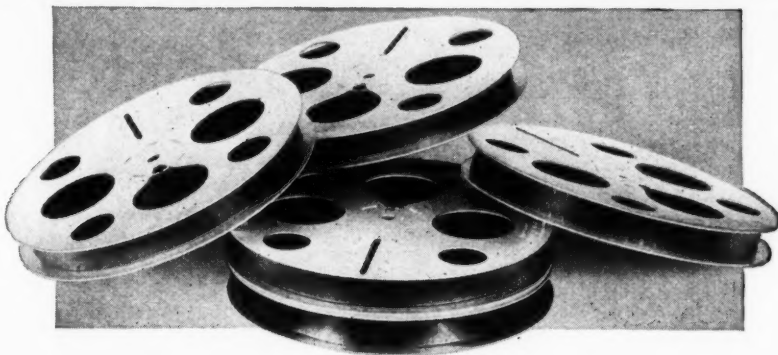
"The findings of this inquiry, however, warrant the statement that no valid proof has been presented that state publication is more economical financially to the state than state purchase of textbooks would be; and that no such proof can be presented under present methods of accounting.

"The further statement is warranted that the losses through nonusage of state textbooks and the added expenditure, forced upon local districts in an effort to compensate for the educational deficiencies and disadvantages of state printing, are so great that an extraordinary and seemingly impossible saving over prices under state purchase must be made by the state in original costs of production to make up for these indirect costs.

"Should all final costs, both direct and indirect, be included in the price of state-printed books and a valid comparison of publisher and state printing prices were made available, the evidence presented here would strongly indicate that there could be no financial advantage possible to the state in the state printing of textbooks.

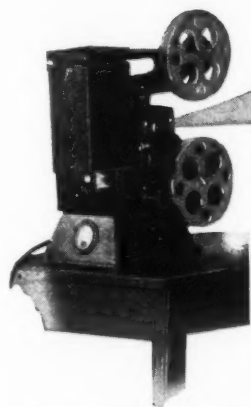
"In fact, the evidence is so strong as to justify a logical conclusion on the basis of the facts disclosed, requiring a negative answer to the question set as the problem for the second part of the main study: As compared with state purchase of textbooks, is state publication more economical financially to the state?"

(Concluded on Page 142)

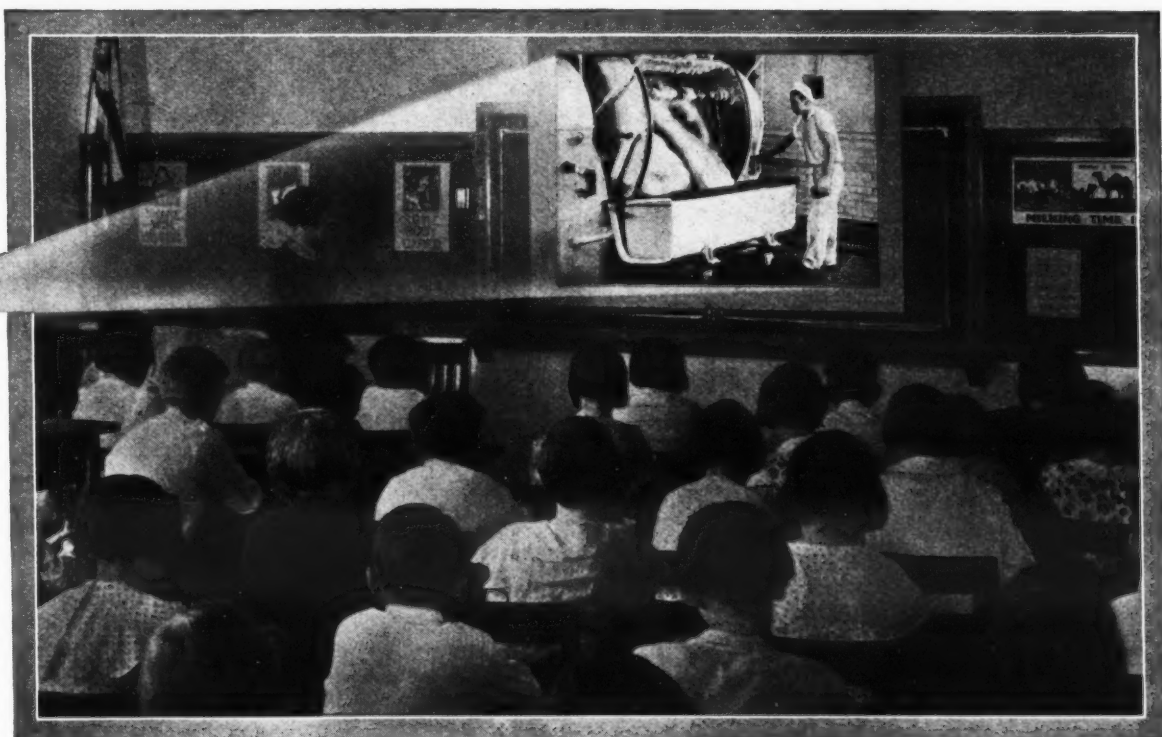


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THE
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PRESS

(Concluded from Page 140)

"If it is agreed, and few authorities differ, that books in the schoolroom are an educational agency of importance second only to the teacher, it follows that per unit of educating done, books are by far the cheaper of the two; and if financial saving alone were the consideration, saving in books would be a minor means of curtailing educational outlay by comparison with retrenchments in teacher salaries or with economies in other school expenditures.

"In fact, it may be stated that, for value received, educationally, no other vehicle provides a way to such large returns on investments as do schoolbooks. True economy, were reduction in educational expenditure mandatory, would choose last of all this method of attempting savings, but would, on the other hand, provide, whatever other educational advantages might need to be foregone, a plentiful supply of the best books that the art and science of modern textbook making could produce.

"The final conclusion reached in this study is: that, when all costs, direct and indirect, are included, the probabilities point to an actual loss rather than to the possibility of any financial gain to the state resulting from the state publication of textbooks is relatively insignificant and that no more valuable educational agency per dollar invested is to be had; that, even were there a saving to be shown in the state printing of textbooks, the possibility of comparatively slight financial savings should not be permitted to curtail an ample, regular and unrestricted supply to the schools of the best modern books produced; that the policy of state printing operates in this state seriously to curtail such a supply of books and otherwise to retard educational progress; and that, for these reasons, state publication of textbooks in California cannot be defended upon either financial or educational grounds."

BOOK REVIEWS

Individual Lessons in United States History

By J. E. McDade and Isabelle Long. Eight units. The Plymouth Press, Chicago, Ill.

These 48 lessons in eight groups of tests provide material for study and testing in the subject of American history, from its European backgrounds to the establishment of the government. The familiar multiple-choice form of test question is used in a way that will cause the pupil to study his text and reference books intelligently and purposefully.

The Kelpies Run Away

By Etta A. Blaisdell. Cloth, 156 pages. Price, 65 cents. Little, Brown & Company, Boston, Mass.

The further adventures of a group of fairy children who lived at the bottom of the sea are charmingly told for children at the second-grade level.

Medieval Map of East and West

By Alice York. Paper, 38 by 28 in. Price, \$2. The John Day Company, New York, N. Y.

This map should appeal to all teachers of medieval history who desire to give their students some appreciation of the colorful and romantic happenings of the period from the fifth to the fifteenth centuries. The map is in full color, and while it is rather humorous in style, it is distinctly serious in content and purpose.

Number Games and Stories

By Harriet E. Peet and F. L. Clapp. Cloth, 186 pages. Price, 76 cents. Houghton Mifflin Company, Boston, Mass.

The term "arithmetic primer" describes this interesting book rather well, but conveys no suggestion of the vast amount of scientific material which the authors have employed to round out the method, the choice of number combinations, the order of number facts, the vocabulary, and the

motivation. The authors hold to the principle that the child must first learn to compute with concrete numbers before he can learn to use abstract numbers. Number facts and processes cannot be taught in isolated units; they must be presented in carefully arranged groups so that the child learns them in relation to what he already knows and masters them in a natural way. Throughout, emphasis must be placed on teaching how to work, how to use number relations in everyday situations and in an unconscious way, how to apply number facts and processes, and to reason numerically.

Stories, play, child tasks that have child interests are used as settings for the lessons. Time and money are among the practical applications which are emphasized. The vocabulary is that of the advanced first grade and of the second grade, and is well established on accepted standards.

The order of number facts is quite simple and practical, and involves the repetition of the most difficult combinations and reverses. Tests and drills are frequent and so arranged as to invite the child to improve.

Progress Tests in American History

By F. L. Clark. Paper, 275 pages. Price, 60 cents. Published by Charles Scribner's Sons, New York.

The entire range of American history, from the earliest beginnings to present-day conditions, is embraced in this collection of new-type tests. Each unit contains a true-false, a completion, a yes-no, and a logical-selection test. The groups are balanced to bring out the essential facts of a given event, problem, or historical condition. Especial attention has been given to bringing out the student's understanding of causes and effects, quite as much as to dates, places, and persons.

Progressive Business Arithmetic

By William L. Schaaf. Cloth, 440 pages. Published by D. C. Heath & Company, Boston, Mass.

The author has sought to meet four problems of teaching arithmetic for commercial purposes: (1) Students of the subject have no background of economic principles and actual business practice;

(Concluded on Page 144)

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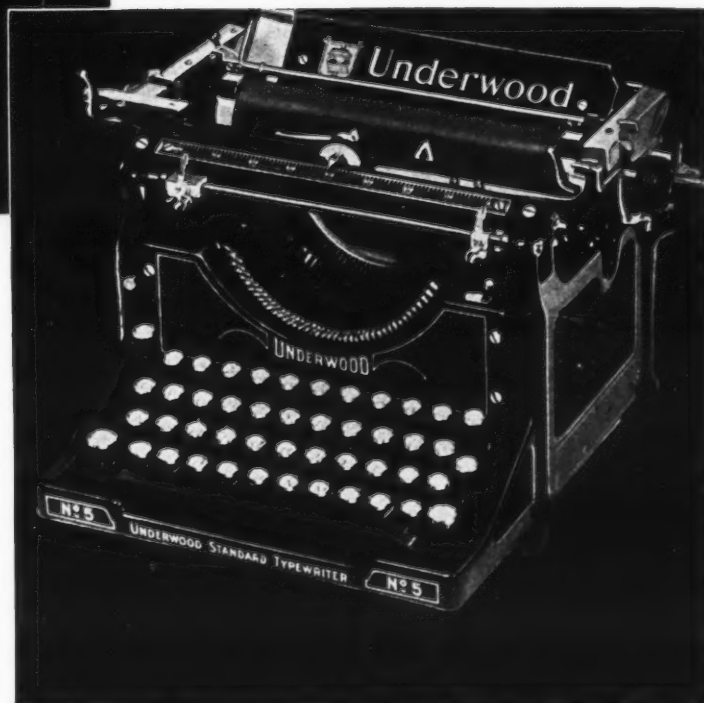
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(Concluded from Page 142)

they need at least sufficient information in these directions to understand the significant mathematical problems which they are asked to solve and the reasons why they are presented to them. (2) In the business world mathematical computations are made under very real conditions for very real purposes, and students after reviewing the fundamentals, should have the benefit of motivation which results from a functional presentation of quite up-to-date business practice. (3) Beginners in business practice cannot be expected to solve problems that are very advanced in their business, accounting, or mathematical aspects. For this reason, the business topics, as well as the computations required, must be held within the abilities of children in the junior high school and first year of the senior high school. (4) The best pedagogic devices must be introduced to secure adequate drill, reviews, and remedial study. In a word, the book must be entirely teachable.

The author has quite satisfactorily achieved his purposes and has produced a well-balanced work that should insure accuracy and rapidity of work, quite as much as considerable information on business practice.

Accounting for Depreciation of School Buildings

By George S. Murray. Paper, 45 pages. Price, \$1. Issued by the Author, at 23 Judson Ave., New Haven, Conn.

This study, which is the first word on the important subject of school-building depreciation as an element of educational-service cost, aims to set up basic principles for the determination of depreciation and a sensible procedure for calculating depreciation allowances. The author has offered a valuable contribution to the subject which should prove useful to architects, accountants, school-board members and members of building committees who find themselves faced with a problem of this kind.

In his opening chapters, the author indicates that the present value of the existing 265,000 school buildings is approaching the total of \$4,750,000,000. All of this property is on "a steady march to the junk heap" and must be replaced ultimately because of growing educational obsolescence, wear

and tear, and simple physical deterioration. In the commercial world, depreciation is an important factor in determining property values, and well-established principles have been developed in support of quite elaborate techniques for fixing present values, as well as depreciation rates for all kinds of real estate improvements, machinery, and equipment. Municipalities and other governmental units have been slow to adopt depreciation accounting because there have been few legal requirements and no popular urge to do so. In fact, there are many incentives for ignoring this true annual cost of various governmental services.

In school accounting, depreciation has become an increasingly important element in accounting. The necessity of protecting school districts against losses through fire and other disasters is an obvious reason for knowing the value of each school building. More important, however, is the need for accounting to the public the accurate and complete costs of running a school system. Finally, planning activities as exemplified in long-term building programs are dependent upon factual studies of conditions, and are only possible if the real value of the existing school plant is known and appreciated.

The author's score card is comparatively simple in its application to actual buildings. Its validity is rather well established insofar as the factors of first costs, life of materials, and similar elements are concerned. The rate of depreciation of educational value is an open question that may or may not hold true.

The book offers the first well-considered analysis of educational implications and actual experience of building depreciation that will give the school accountant a specific technique for determining dependable depreciation allowances. As such, every school-board office should welcome and use a copy.

Teaching Values in New-Type History Tests

By Elene Michell. Cloth, 189 pages. Price, \$1.80. World Book Co., Yonkers, N. Y.

Tests and examinations are not an end in themselves, but a means of better teaching and better learning. In the author's opinion, the new types of tests can be used most effectively in guiding the student to use the facts of history as a means of developing judgment and acquiring the ability to

think constructively on historic and civic matters. The author is overenthusiastic concerning the behavior results to be expected from the teaching of history as a subject *per se*. Her discussion of the nature, construction, and use of informal objective tests is exceedingly helpful and suggestive. The procedure recommended for constructing tests can be employed by any teacher. Teachers of any of the social subjects will find this part of the book a valuable guide to the new type of testing in their special field.

Makers of Our Nation

By Reuben Post Halleck and Juliette Frantz. Cloth, 364 pages. American Book Co., New York, Cincinnati, and Chicago.

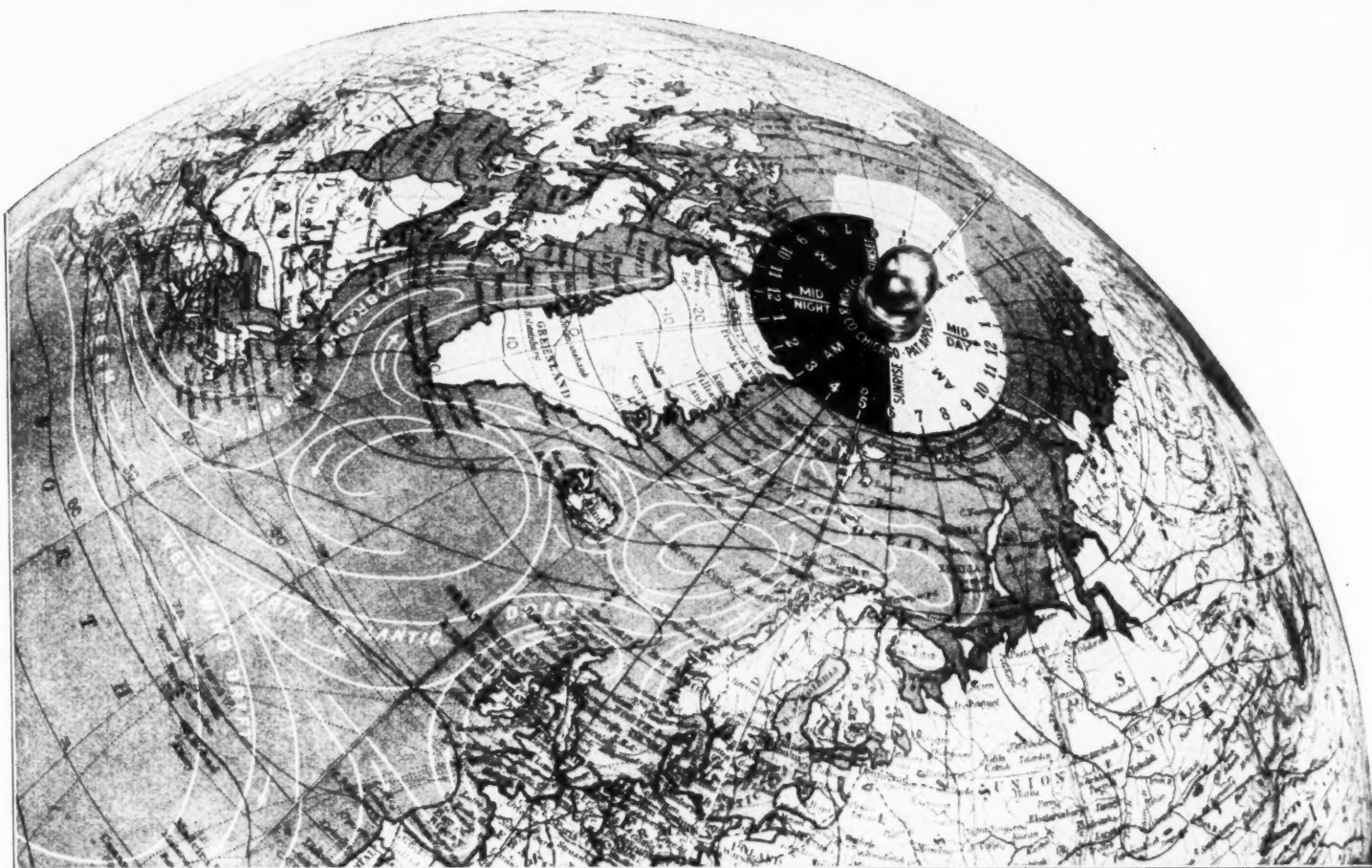
The story of American history from the beginning of the Revolution to the end of the world war is here told in terms of the lives of great leaders — of the makers of our nation. The arrangement permits the authors to make clear the main facts of the life and problems of our people in a manner that will arouse the imagination of children. At the same time it will permit children to grasp the significance of the main events in our history with due regard for the background and after effects. The biographies are so selected that none is isolated from the direct movement of the historic narrative. In fact, the stories of the careers of explorers, patriots, pioneers, inventors, and statesmen, are frequently touched but lightly in the telling of facts of important events. The entire book is kept quite within the mental and language abilities of fourth and fifth graders. The book has splendid values for teaching history, so that the authors need hardly exaggerate its ethical and action values, as they do in the preface.

Solid Geometry

By R. R. Smith and L. W. Smith. Cloth, viii + 238 pages. The Macmillan Company, New York, N. Y.

This book is a continuation of the authors' *Beginners' Geometry* in the field of three dimensional figures. The method and the teaching aids make the book especially useful for classes where the ability range of pupils varies.

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Children as well as grown-up people are apt to think of directions on the map—north and south, east and west—as coinciding with the edges of the map, that is they take the vertical edges of the map to run north and south, the horizontal edges to run east and west. This would be true only on a few maps—those made on the Mercator's Projection—on most maps it is far from true. A Globe should be used for teaching direction and for correcting erroneous ideas which the map may have conveyed. It should accompany the map study at all times.

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A GENEROUS GIFT TO EDUCATION

It has become a tradition in this country that bequests for the cause of education must go to the higher institutions of learning, and not to a public-school system. The latter are supported by taxation, it is held, and hence are not in need of special aid, while many of the colleges and universities could not exist without liberal endowments.

The fact remains, however, that there are many communities where the common-school system has positive needs which in the nature of things cannot be met unless private aid is afforded. There are many instances in the school field of the United States where wealth may come to the rescue and provide, if not much needed, at least highly desirable agencies in promoting the cause of education.

The Woodward Memorial Library recently completed at Le Roy, New York, affords a case in point. It is the gift of the Woodward family presented as a memorial to the late Orator F. and Cora Talmadge Woodward.

The building is a stone structure in the Doric style of architecture, which stands on the public-school campus, with the high school on the north side, and the grammar school on the south side. To the south and east of the library, there is a fine stadium, designed in brick, steel, and concrete, to harmonize with the structures about it. The beauty of the setting has been enhanced by a careful landscaping scheme, providing for spacious lawns and shrubbery.

The building is a two-story structure. Entering the spacious vestibule, finished in Verdi antique marble and walnut trim, one approaches the main floor, which is given over to the bookcases, reading tables, chairs, and files. The portico is done in American bluestone, the roof is of lead-coated copper, and the basement windows are protected on the outside by wrought-iron grills of attractive design.

The interior finish in the main library rooms and the vestibule is in a soft gray color. Venetian blinds are used at the windows on the main floor, while the floors are covered with rubber tile in a mottled light and dark effect. The furniture, shelves, and tables of special construction, are finished in walnut.

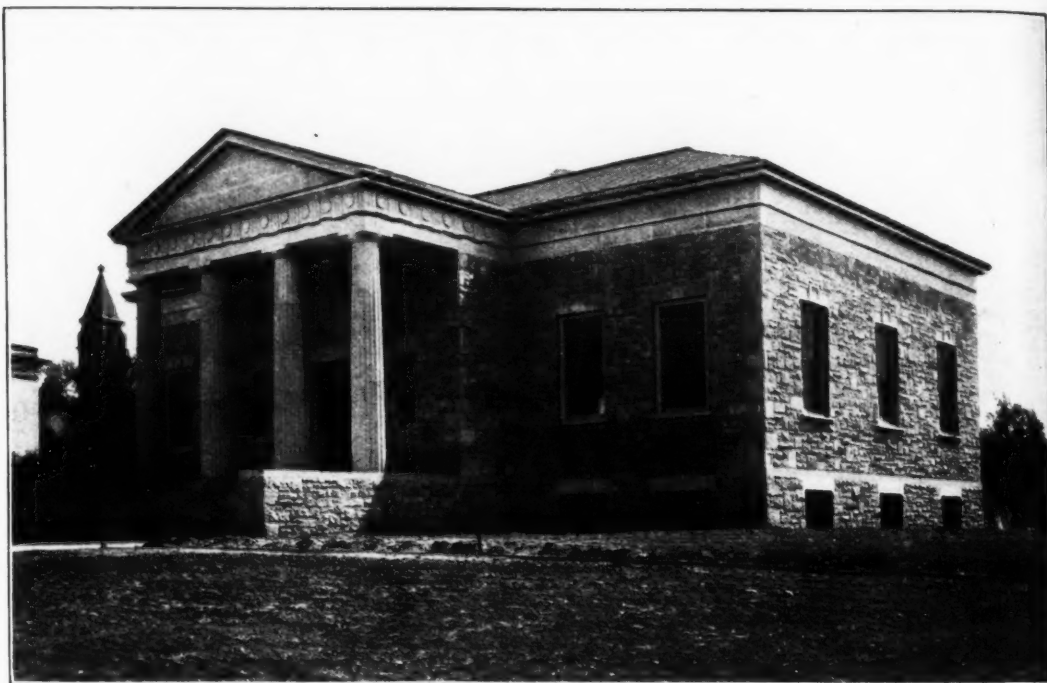
At the rear, directly opposite the vestibule entrance is a large fireplace, trimmed with black and gold marble, while above it is a paneled mirror of beautiful design. In the alcove on one side are reference books, while on the other are books of recent fiction and nonfiction.

From the entrance vestibule, two tiled stairways with wrought-iron railings, lead to the basement where the woodwork is enameled, carrying out a color scheme of buff and cream. The basement lobby is similar to the entrance vestibule, with the stairways facing each other. Swinging doors open into a large assembly hall, which is well proportioned. Folding partition doors on the south permit the museum room to be thrown into one, providing a meeting place for several hundred persons. There is a fireplace at the east end of the assembly room. On the north is another librarian's room, a kitchen, and a janitor's service room.

At the present time the library is made up of 9,000 volumes of all kinds of reading. About two thirds of a fund of \$15,000 given by the Woodwards for the purchase of books has been expended for that purpose, leaving \$5,000 available for the purchase of further works. In addition, there are 700 volumes of various works given by the LeRoy Library Association and reconditioned for library purposes, as well as many books from the high-school library.

NEWS OF SCHOOL OFFICIALS

♦ The school board of Anderson, Ind., has reorganized, with the election of Mrs. AUGUSTA MILLS-PAUGH as president, Mr. JOSEPH T. DAY as secretary, and Mr. LINFIELD MYERS as treasurer.



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♦ Mr. E. J. OSWALD has been elected president of the school board of Crystal Falls, Mich. Other officers elected were Mrs. MYRTLE GREEN, secretary, and Mr. CASPER BAUER, treasurer.

♦ Miss MABEL OVERGORD has been elected clerk of the school board of Renovo, Pa., to succeed Miss Dorothy Hevner.

♦ The school board of Noblesville, Ind., has reorganized, with the election of Mrs. MARY C. WICKER as president, Dr. O. K. YOUNG as secretary, and Mr. GUS DREHER as treasurer.

♦ Mr. WILLIAM H. MENAUGH has been elected secretary of the school board of South Bend, Ind., to succeed William Lechlitter.

♦ Rev. HAROLD FARSETH has been elected president of the school board of Hibbing, Minn. Other officers elected were Mr. EMIL SALMINEN, clerk, and Mr. GEORGE MARTINSON, treasurer.

♦ Mr. E. W. FITCH has been elected president of the school board of Huntington, Ind. Other officers elected were Mr. J. L. BRENN, secretary, and MILDRED E. COOLMAN, treasurer.

♦ Mr. B. E. KETCHAM has been reelected as president of the school board at Madison, S. Dak.

♦ The school board of Washington, Ind., has been reorganized, with the election of Mr. WILLIS HODINOTT as president, Mr. WILLIAM M. YOUNG as secretary, and Mr. A. C. EVANS as treasurer.

♦ Mr. C. M. NILES has been reelected as president of the school board of Benton Harbor, Mich. Mr. M. J. HALL was reelected as secretary.

♦ Dr. JOSEPH W. MERRITT has been elected president of the school board at St. Joseph, Mich.

♦ Mr. DON J. BEST has been elected president of the school board of Galva, Ill. Other members elected were Mr. A. L. APPELL, Mr. ROBERT PETERSON, Mr. W. N. NELSON, and Mr. A. E. ANDERSON.

♦ Mr. OSCAR CHESTERFIELD has been elected president of the school board at Clinton, Ind. Mr. ERNEST BOETTO was elected treasurer, and Dr. D. C. SHAFF secretary.

♦ Mr. H. C. BATES has been elected president of the school board at Dexter, Mich.

♦ The school board of Kokomo, Ind., has reorganized, with the election of Mr. J. A. KAUTZ as president, Dr. J. C. STONE as secretary, and Mr. K. H. RICH as treasurer.

♦ Mr. VILAS SCHINDLER has been reelected as president of the school board of Berne, Ind. Other officers elected were Mr. G. W. SPRUNGER, secretary, and Mr. E. H. BAUMGARTNER, treasurer.

♦ Dr. T. C. DODDS has been elected president of the school board of Hartford City, Ind. Other officers elected were Mr. JAMES WILLMAN, secretary, and Mr. IRA ELZEY, treasurer.

♦ The school board of Doniphan, Mo., has reorganized, with the reelection of Mrs. K. K. SHERWELL as secretary, and Mr. P. J. BURFORD as treasurer.

♦ The school board of Chetopa, Kans., has reorganized for the school year, with the election of Mr. JAMES REED as president, Mr. ST. ELMO PORTER as vice-president, and Mrs. J. B. REYNOLDS as clerk.

♦ The school board of Omaha, Nebr., has elected Mr. GEORGE C. ADWERS chief engineer and superintendent of buildings, at a salary of \$4,500 per annum. Mr. DUNCAN C. FINLAYSON, formerly superintendent of buildings, was named custodian of supplies, at a salary of \$3,000.

♦ Mr. VIRGIL W. MCCLINTIC was elected president, and Mrs. HANNAH VOWLES, secretary, of the school board at Mt. Pleasant, Mich.

♦ The school board of Shelbyville, Ind., has reorganized, with the election of Mr. IVAN C. SCOTT as president, and Mr. HENRY JOSEPH as secretary.

♦ Dr. R. B. DUGDALE has been reappointed to the South Bend, Ind., board of education. The *South Bend Times* says: "Dr. Dugdale has shown a grasp of school affairs that comes with experience and the faculty of good judgment, which is of great value to his community."

♦ The school board of Buhl, Minn., has reorganized, with the election of Mr. A. J. ERCHUL as president, Mr. GEORGE BARRETT as secretary, and Mr. WILLIAM MCCABE as treasurer. Dr. A. W. SHAW was elected as a new member, to succeed M. A. Nichols, who resigned.

♦ The school board of Duluth, Minn., has reorganized for the school year, with the reelection of Mr. F. D. KNIGHT as president, Mr. CHARLES G. FIROVED as vice-president, and Mr. H. J. FORSBERG as clerk.

♦ Dr. J. A. BEVERIDGE has been reelected as president of the school board at Marysville, Kans. Mr. GEORGE GRIFFITHS was reelected as clerk of the board.

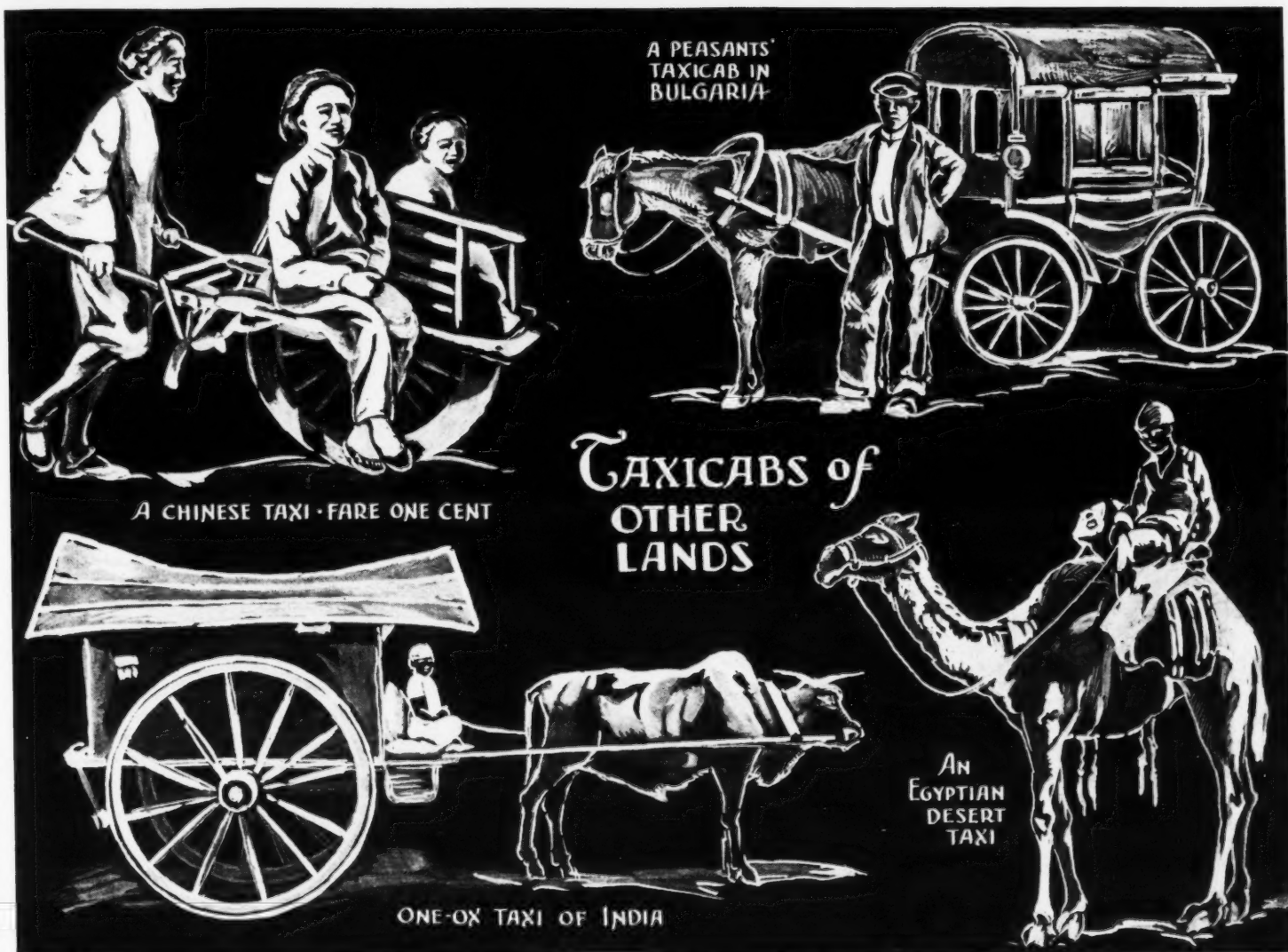
PASSING OF DR. EMERSON

Dr. Henry P. Emerson, superintendent of schools of Buffalo, N. Y., from 1893 to 1918, died recently at his home in Middleton, Mass., at the age of 84.

Dr. Emerson was a unique figure in a small group of city superintendents who held office for long periods of time. For more than 44 years he was a moving spirit in the school system of Buffalo, and during a quarter century he was the chief executive officer. His superintendency which covered 25 years, was in the stress and strain years of education in New York state.

Dr. Emerson who was born in Lynnfield, Mass., was graduated from Phillips Andover Academy and the University of Rochester. In 1874 he went to Buffalo from the State Normal School at Potsdam. In 1883 he became principal of Central High School, and in 1892 he was elected superintendent of the city schools, a position which he held for 25 years.

Dr. Emerson was responsible for the development of primary work and evening schools. He had charge of the movement for the creation of a new school board and was the author of a number of textbooks. He retired from the superintendency in January, 1918, after the completion of a long period of service.



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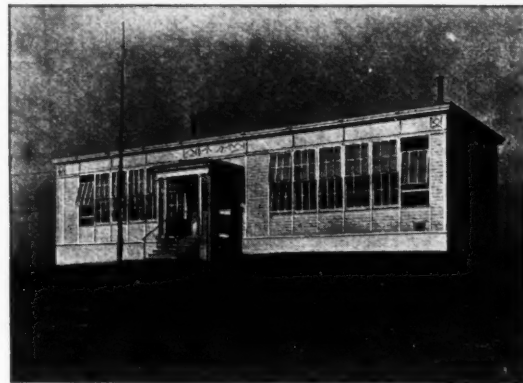
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WASHINGTON CORRESPONDENCE

A. C. Monahan, Formerly U. S. Bureau of Education
Education in the Washington Bicentennial

Washington, D. C., during the year 1932, will be the meeting place of many important educational associations. There seems to be a sort of tacit understanding that both the Department of Superintendence and the National Education Association, will be among the number. The programs of these educational groups will be part of the great celebration lasting throughout the year in honor of the 200th birthday of George Washington.

While the program runs throughout the year, it is emphasized on seventeen special days, including the principal holidays of the years, and other days given more or less observance. Three of these special days will be given over in part to educational or school groups: New Year's Day, Washington's Birthday, and the Fourth of July. The New Year's Day program is the opening of the year's observance. The program for the day itself will begin with the singing of patriotic songs by a great chorus of school pupils of at least 10,000 children. It will take place at the Capitol of the United States, with the chorus grouped on the front stairs and in the plaza where the great inauguration exercises take place each four years.

February 22 will be celebrated with an address by the President of the United States, followed by a pilgrimage, led by the President and a thousand Government Officials, the superintendents, and other educators of the Department of Superintendence, to the shrines of the first President in Washington and the vicinity. Programs at each of these shrines will be carried out lead by some of the educators, symbolizing Washington's life and ideals. In the Independence Day program, officials and members of the National Education Association will be given a prominent part.

The committee in charge has announced certain tentative plans for the bicentennial. Three things are to be given special attention on the program

meetings in Washington of great national bodies; conferences of educational, intellectual, and spiritual leaders of America; and the dedication of memorials to Washington, including the Memorial Bridge over the Potomac River in a line with the Lincoln Memorial and Arlington National Cemetery, the Washington Memorial Highway connecting the city with Mt. Vernon, and the First President's birthplace at Wakefield, Virginia.

Reducing Wall Air-Leakage in Frame School Buildings

The effect of using building paper between sheathing and clapboards or shingles, in the side-walls, or in the roof, of school and other frame buildings has been studied by the American Society of Heating and Ventilating Engineers. The study had to do with the effect of the building paper in keeping out air, particularly under wind pressure. The prevention of air-leakage, of course, makes heating easier and keeps out dust and dirt, decreasing cleaning problems and improving sanitation.

It was found that a good quality of building paper between the sheathing and outside cover reduced the leakage of air from 95 to 99 per cent. In other words, only from one to five per cent as much air entered through the protected walls as through the walls without the paper.

The desirability of building paper between shingles and the supporting boards of the roof was shown up even more strongly. Sixteen-inch red-cedar shingles, laid five inches to the weather, over 1 by 4-inch boards spaced about an inch apart, leaked air at the rate of 70 cubic feet per hour. The same construction with building paper between the shingles and the slat deck leaked only .4 of a cubic foot per hour. With 24-inch shingles, such as are used for side walls, exposed 11 inches to the weather, the corresponding leakage figures are 122 and .13 cubic feet.

In making these tests the American Society of Heating and Ventilating Engineers built panels of the construction to be tested, 6 feet wide and 9 feet high. They were built on 2 by 4 studs, set 16 inches on the center, with wood siding and sheathing boards on the outside, and lath and plaster on the inside. In other words, they repro-

duced the ordinary complete side-wall construction. These panels were fitted when tested in a square tunnel, in which air pressure similar to that of a 30-mile wind was maintained by a motor-driven fan. The air that passed through the panel was collected and measured in another tunnel on the other side from the fan.

In the tests different grades of building paper were used. The difference in the amount of air passing through different paper was found to be considerable, varying from .3 of 1 per cent in high grade paper to 2.9 per cent in poorer paper.

The tests showed that, with a good paper used between the sheathing and siding, it is practical to get a wall that is almost air-tight. They showed also that the reduction of air-leakage with the consequent improvement in comfort, is far out of proportion to the minor cost of applying good building paper over walls and roof surfaces. Even where weather extremes are never great, the paper excludes dust and dirt and the expenditure is warranted for this improvement alone.

Corner Stone Laid for New N.E.A. Building, Washington, D. C.

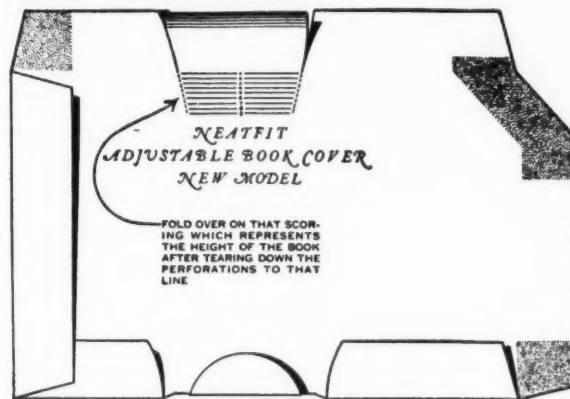
The corner stone laying of the National Education Association building in Washington was attended with several notable addresses. The principal one was made by the U. S. Commissioner of Education, Dr. W. J. Cooper. Other speakers were Joseph H. Saunders, superintendent of schools of Norfolk, Virginia, who represented the N.E.A. Board of Trustees; W. A. Sutton, president of the N.E.A., who is superintendent at Atlanta, Ga.; Miss E. Ruth Pyrtle, of Lincoln, Nebraska, who was president during the past year; and Walter R. Siders, secretary, World Federation of Educational Associations. Names of the 3,750 life members of the National Education Association, whose dues made the new building possible, were placed in the corner stone, and several articles having to do with the association and its history.

Forthcoming Government Bulletin on School Buildings

In approximately two months' time, another bulletin on American Schoolhouses will be avail-

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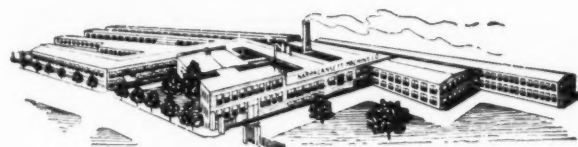
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able from the U. S. Office of Education. This bulletin which will be a revision of a previous one by the same title published in 1924, in turn was a revision of one published in 1910. All of these bulletins were prepared by Dr. Fletcher B. Dresslar, who died since this last manuscript was prepared, at his home at Nashville, Tenn. Dr. Dresslar was for some years a member of the Office of Education staff, leaving the government service to become professor of education at Peabody College for Teachers.

In the preparation of the new bulletin several members of the Bureau staff assisted. It contains much general information needed by architects and school authorities charged with the layout and construction of school buildings, and includes a number of illustrations reproducing modern school buildings of all types.

Assistant U. S. Commissioner of Education

Miss Bessie Goodykoontz, assistant commissioner of education, represented the United States government at two foreign meetings during the summer. These were the Pan-American Child Congress, held at Lima, Peru, July 4 to 11, and attended by representatives of all countries of the two Americas. The other meeting was the Second Pan-Pacific Women's Conference, August 9 to 22. Official representatives of the nations bordering on the Pacific Ocean attended the meeting.

The position held by Miss Goodykoontz is now approved by Act of Congress. At the time of her appointment, less than a year ago, it was a position created by executive order. Just before Congress adjourned, an act was passed and signed by the President making the position permanent.

No salary is fixed in the measure providing the office. It is, however, provided in the appropriation bill for the year at \$6,500.

COST OF EDUCATION IN COUNCIL BLUFFS, IOWA

Supt. Theodore Saam, of Council Bluffs, in a special report to the board of education, calls attention to the cost of instruction in the schools and compares educational costs in Council Bluffs with those of other cities in the state, ranging in population from 30,000 to 100,000.

Of 134 cities, 65 spent over \$100 per pupil, and only 21 had a lower cost than Council Bluffs. Of

Financial Data for Council Bluffs and other Iowa Cities Compared for Year Ending June 30, 1929		
Bonded Indebtedness	General School Expenditures	Per Cent Total Taxes
Burlington.....\$ 83	Muscatine.....\$ 74	Dubuque.....34.0
COUNCIL BLUFFS.....100	COUNCIL BLUFFS.....75	Des Moines.....40.6
Muscatine.....119	Marshalltown.....79	COUNCIL BLUFFS.....43.5
Sioux City.....133	Ottumwa.....83	Mason City.....45.5
Ottumwa.....136	Fort Dodge.....86	E. Waterloo.....46.6
Mason City.....140	Clinton.....88	Burlington.....46.9
E. Waterloo.....146	E. Waterloo.....89	Cedar Rapids.....47.1
Davenport.....160	Mason City.....90	Sioux City.....48.1
Cedar Rapids.....163	W. Waterloo.....92	Ottumwa.....48.5
Marshalltown.....165	Burlington.....98	W. Waterloo.....49.8
Fort Dodge.....179	Sioux City.....107	Muscatine.....52.7
W. Waterloo.....182	Cedar Rapids.....109	Lyons.....53.0
Dubuque.....317	Davenport.....115	Clinton.....53.2
Des Moines.....323	Des Moines.....121	

cities north of Mason and Dixon, only two cities had a lower cost than Council Bluffs. The cost for the different activities listed are as follows:

Cost of Six School Activities		
Council Bluffs	Cost in 134 Cities	
Administration.....\$ 2.62	\$ 2.93	
Instruction.....57.22	77.72	
Coördinate activities.....3.39	3.33	
Operation.....8.94	11.08	
Fixed charges......62	2.05	
Maintenance.....2.27	4.24	
Total.....\$75.06	\$101.35	

A total of twelve cities had a cost of over \$100 per pupil for bonded indebtedness, and only one city had a lower cost than Council Bluffs. Four cities spent more than \$100 per pupil for general expenditures, and one city had a lower cost than Council Bluffs. In the percentage of total taxes spent for schools, eleven spent more than 40 per cent, while two had a lower percentage than Council Bluffs. Three cities spent more than 50 per cent, and one city less than 40 per cent.

NEW YORK CITY GRADE-SCHOOL ENROLLMENT AT A STANDSTILL

The elementary-school enrollment of the city is at a practical standstill and is not expected to increase to a marked extent this year, according to estimates of the board of education's budget committee. An increase of 548 students is anticipated this year over October, 1929, and a further increase of 945 students next year. These increases in a total enrollment of nearly 800,000 are regarded as nominal. The enrollment in the junior high school will reach 98,000, as compared with 95,300 last year. In 1931 there will be 2,715 additional students,

raising the total for the junior high school to 100,000. By October, 1931, the total is expected to reach 101,385.

In the senior high school the enrollment is still rising in considerable numbers. Last year there were 165,000 high-school students registered, and the budget committee anticipates 2,500 additional students, or approximately 168,000, an increase of 16,000 over last fall. By the spring of 1931, the committee anticipates an additional 7,500 students, and a net increase of 1,100 more by the fall of 1931, making the total well above 176,000.

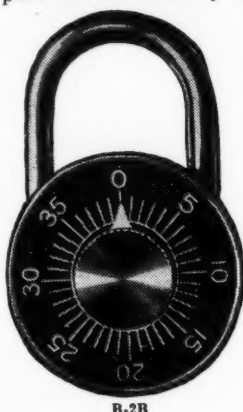
The small increase in elementary schools is attributed to a lower birth rate and to the organization of additional junior high schools, which have taken a large proportion of their pupils from the upper elementary grades. The curtailment in the number of pupils has been partly responsible for the enormous oversupply of qualified teachers. There are at the present time more than 3,800 teachers awaiting appointment, which is sufficient to supply the school system for the next four years.

TEACHERS' SALARIES

♦ A total of \$89,221,412 has been set aside in the 1931 school budget of New York City to pay the salaries of the teachers and principals in the elementary and high schools during the next year. Of the total, \$62,299,370 will be spent for elementary-school salaries, and \$26,922,042 for high-school salaries. An increase of 270 high-school teaching positions was allowed for next year, while the elementary teachers' and principals' staffs will be increased by 297, or a total of 567.

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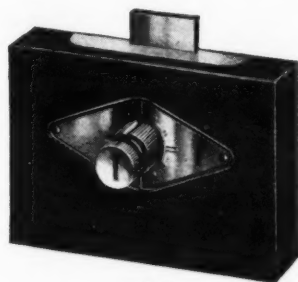
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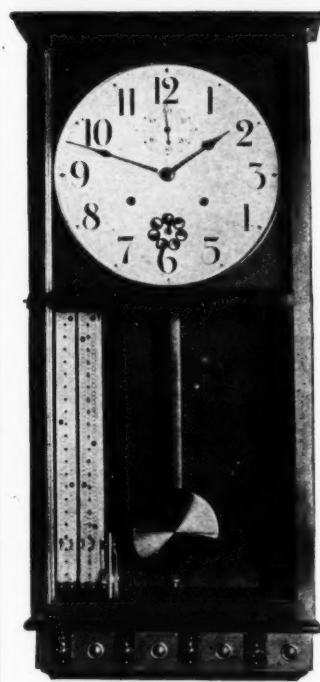
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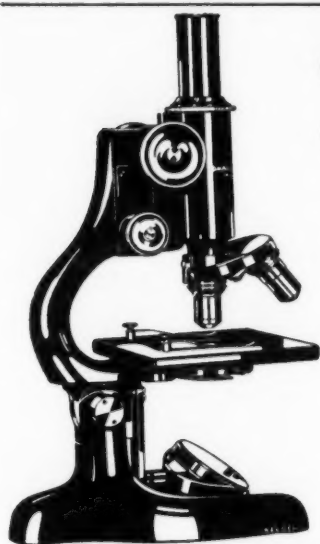
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BOARDS OF EDUCATION

♦ Indianapolis, Ind. The school board has adopted a new plan, calling for a consolidation of the supply, book, and lunch departments, under the direction of John Hubbard, superintendent, and Edwin C. Bulthaup as assistant superintendent.

♦ Alton, Ill. The school board has proposed a number of changes looking toward a raising of the standards governing school janitors. The proposed changes involve the adoption of uniform apparel and the classification of janitors as building custodians.

♦ The school board of Elgin, Ill., has taken action toward installing a system of flood lights on the high-school athletic field. The cost of the lighting system which is estimated at \$4,000, will be paid out of the receipts of football games.

♦ Sioux City, Iowa. The school board has assumed direct control of the school cafeterias, with the appointment of Mrs. W. C. Yeager as supervisor. The cafeterias will be conducted so as to best serve the pupils and offer the most wholesome food at the lowest cost.

♦ South Bend, Ind. A change in the status of school-board members from appointive to elective members, has been proposed as a result of a change in population which places South Bend in the 100,000 population group. Should the proposed change take place, it will become effective in 1933.

♦ Duluth, Minn. The school board has reported a steady decrease in the amount of fuel used in the schools during the past four years, as a result of the guarantee-analysis system of purchasing coal. The report for the 1930 fiscal year showed 11,383 tons of coal used, the 1929 report, 11,671, and 1928 report, 12,011 tons.

♦ The school board of Newton, Mass., in its latest annual report, has criticized the state legislature for establishing too many legal holidays to be observed. It was pointed out that the rapid increase in holidays has seriously embarrassed the school authorities in arranging the program for the school year. The board asks as a solution, that the schools be closed on great national holidays and Saturdays, but that they be kept open on other secular days, in order that the continuity of the schoolwork may be unbroken and the lessons of patriotism be taught in the classrooms.

♦ New York, N. Y. The drastic reduction made by the board of education last March in the amount of salary credit given to reinstated teachers has worked hardships on returning teachers so that the board has planned a further revision. A modification of the rule is sought, so that teachers whose applications were on file before the change was made, will receive the salary credit they would have been entitled to under the old by-law.

Until March 1, a reinstated teacher received virtually full salary credit for his experience rendered prior to resignation. Thus, a teacher who resigned after ten years of service, and who was reinstated after a brief absence, began service again on the tenth year of his salary schedule. The new rule which effected a drastic cut, provided that the number of years' experience be divided by the numbers of years of absence, in order to determine the amount of the salary schedule. Under the arrangement, a teacher with ten years of experience who returned to service after five years' absence, would receive only two years of credit, and would start on the third year, instead of the tenth year of the schedule.

♦ The question as to nonresident teachers was investigated in the State of New Jersey. A questionnaire brought out the fact that the number of new teachers employed this year is 2,317. Of this number, 1,262 were from New Jersey and 1,055 from outside the state. In percentage terms, 54.4 per cent came from New Jersey and 45.6 per cent from other states. An interesting fact shown by the tables is that the percentage of outside teachers engaged for secondary schools was larger than for elementary schools, showing that it was necessary for junior high schools and high schools to go outside the state for a large proportion of their new teachers.

♦ Under a ruling of Attorney General U. S. Webb, of California, school teachers must live in the state while they are teaching. The ruling was given in the case of a teacher employed in Imperial county, and living in Arizona, one and one-half miles away.

♦ Assistant Attorney General Earl F. Wisdom has recently ruled that members of school boards

in Iowa may not sell supplies to the school district, under the school law of the state. A question had been raised as to whether the purchase of coal for school use from the farmers' cooperative commission company, of which four stockholders were school-board members, was legal.

♦ Mr. J. Odell Baker, director of the school-building division of the Arkansas state education department, has recently issued a statement, showing that a total of 222 new schools have been erected, at a cost of \$3,854,710, during the period from July 1, 1929 to June 30, 1930. During the previous year, a total of 255 buildings were erected, at a cost of \$2,636,227.

Of the new schools erected during the past year, 96.8 per cent of them were completed by state or approved plans. During the period, only eight schoolhouses costing \$5,500 were built by plans not approved by the state school-building division.

Mr. Baker, in his report, showed that a total of 284 plans for new buildings were furnished by his department to various communities in each of the 75 counties, as compared with 197 in the previous fiscal year. A total of 31 architects' plans were checked during this period, as compared with fourteen during the previous year.

The number of buildings completed by state plans during the year totaled 189, as against 165 during the year 1928-29. A total of 165 buildings were erected by state plans, without modification, as compared with 146 the previous year. In the six years of the school-building division's existence, only two of the 875 buildings erected have failed to be approved by the department.

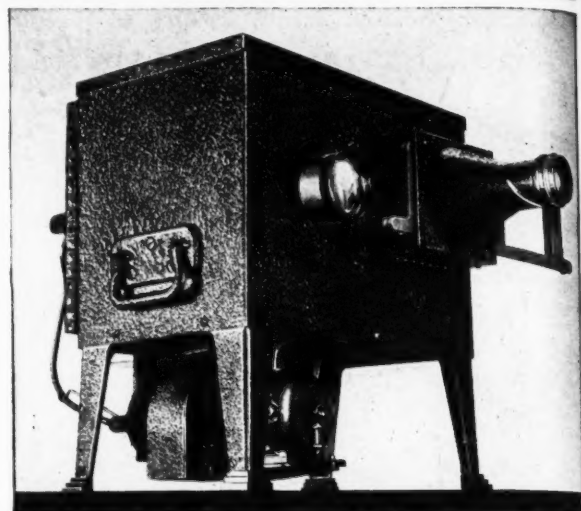
♦ The Wisconsin Department of Public Instruction has recently ruled that a postmaster may legally be a member of a school-district board, under the constitution of the state. While the general rule is that federal office holders are ineligible to office in the state, the Wisconsin law excepts postmasters from this ruling.

♦ The school board of Peoria, Ill., has fixed the tuition rates for the ensuing school year as follows: High school \$145; grade school \$90; kindergarten \$60. The grade-school figure is a reduction of \$5 from that of last year.

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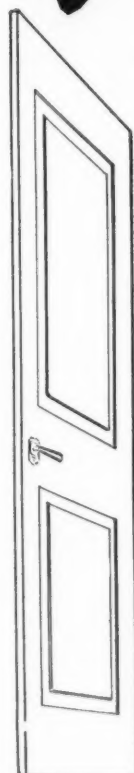
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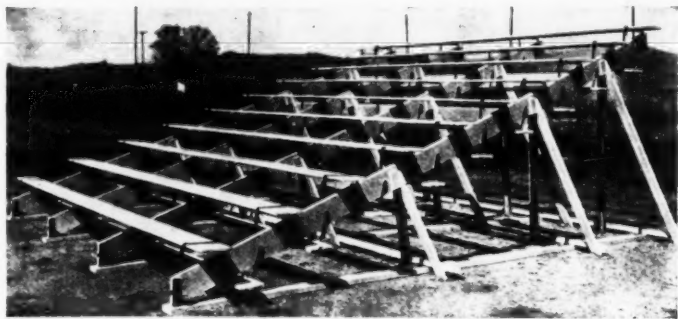
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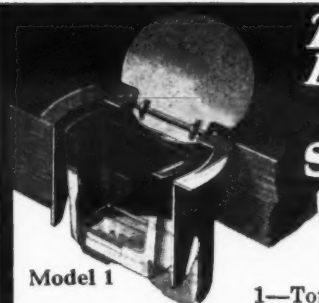
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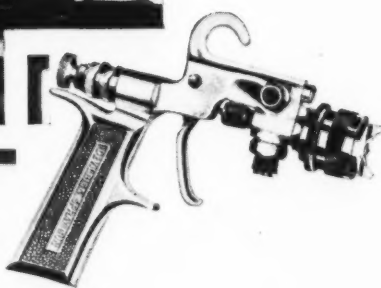
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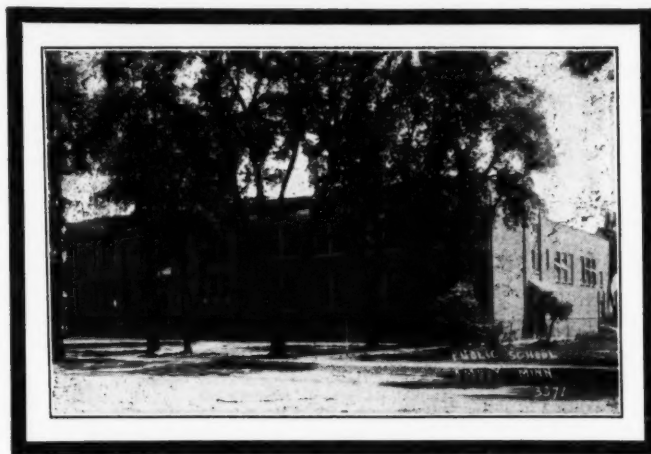
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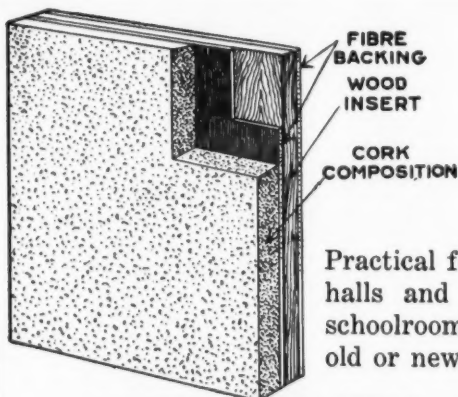
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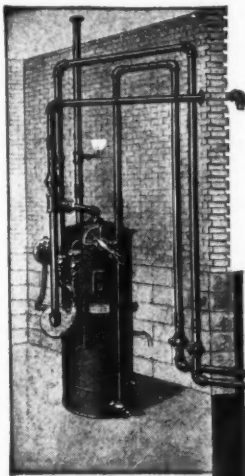
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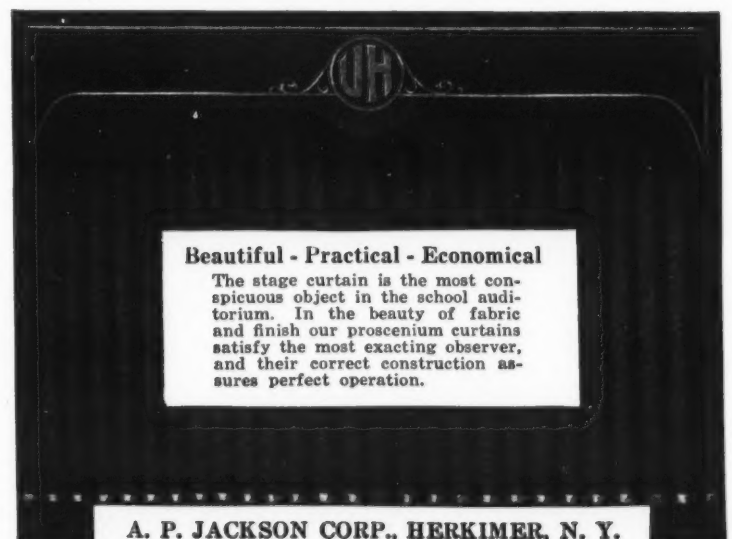
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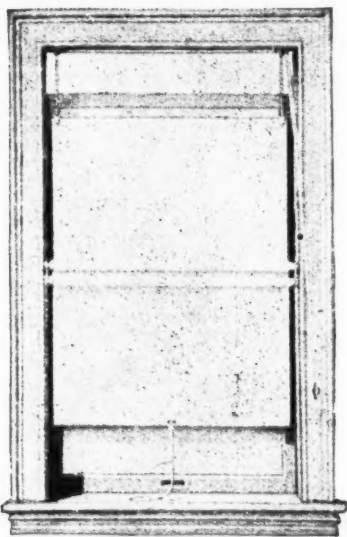
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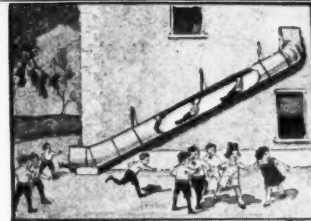
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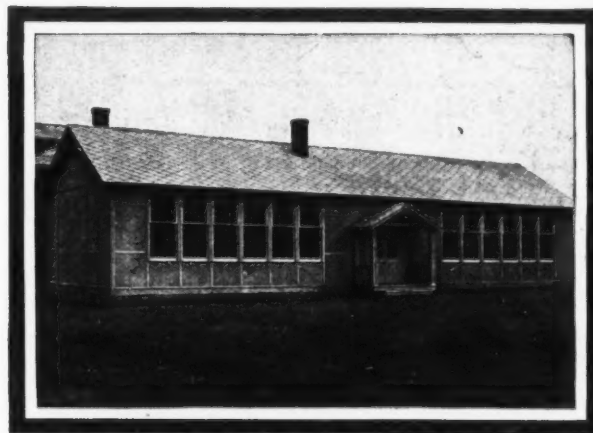
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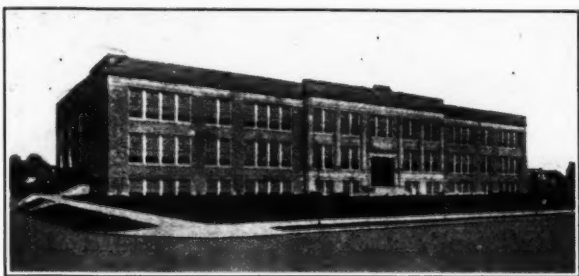
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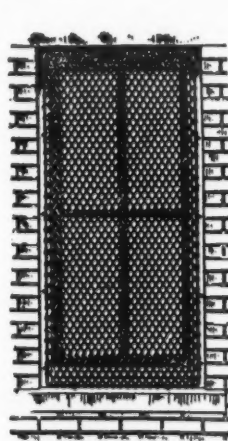
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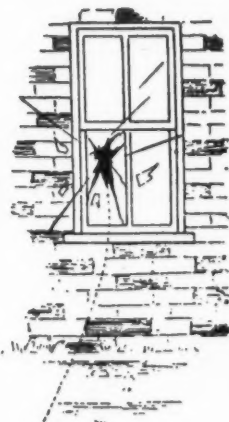
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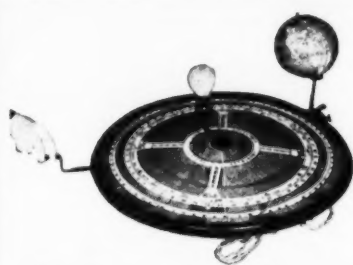


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Mats
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Metal Working Materials
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Paints
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Partitions
Paste
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Pens
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Pictures
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Plaster Board
Plaster Casts
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Projecting Machines
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Radiators
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Roofing
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Rulers and Rules
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School Buses
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Scissors
Sewage Disposal
Sewing Machines
Shades and Awnings
Shelving
Skylight Operators
Slate
Soap
Soap Dispensers
Stage Equipment
Lighting
Scenery
Stair Plates
Stair Treads
Stairways
Stationery
Statuary
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Woodworking Machinery

AMERICAN SCHOOL BOARD JOURNAL, Milwaukee, Wis.

Gentlemen—We are interested in the items as checked above. If you will place us in touch promptly with manufacturers you will be of help to

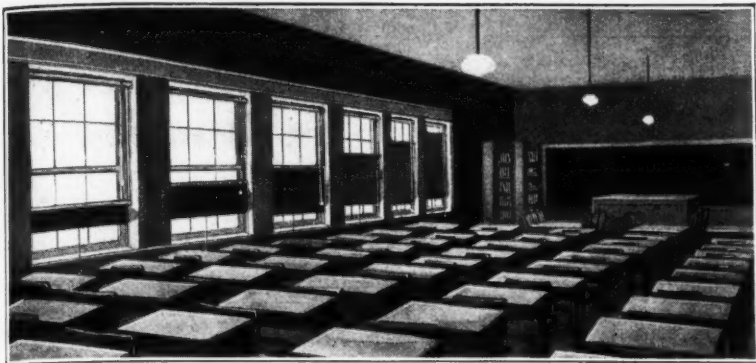
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City..... State.....

Official..... Bids
Title..... Wanted.....193..

Additional Wants

Equip With Ev-El-Eth



Shades carried by the EVELETH ADJUSTERS afford a hitherto unknown degree of:

comfort to the child

Because of perfect adjustment enabling him to receive benefit of properly regulated light without danger of eye-strain.

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Because Ev-el-eth Adjusters operate so easily and quietly.

Because they add to the tidy appearance of the room. The adjusting cord, although very strong, is light in weight and is placed inconspicuously at one side.

Because shade is held in perfectly level position at any desired height. The annoyance caused by shades tilting at various angles is unknown where Ev-el-eth level Adjusters are properly installed.

satisfaction to the School Board and Purchasing Committee

Because of moderate first cost.

Because of carefully selected materials and sturdy construction assuring a long term of service.

Because of the automatic hook which does away with the anchoring of cord to wall or casing.

Further information will be sent upon request.

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Manufacturers of Weather Strip Specialties and Shade Adjusters



A Pencil Sharpener
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The Heart of the Pencil Sharpener is the cutting mechanism. APSCO CUTTERS—ground to a razor edge don't scrape—THEY CUT.

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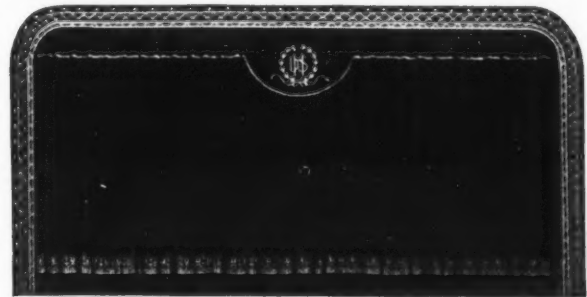
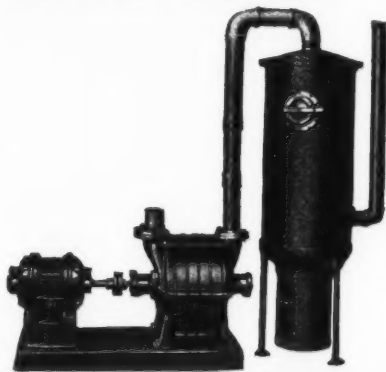
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Angle Steel Stool Company

CABINETS, TOOL (STEEL)

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CABINETS, TOOL (STEEL)

Angle Steel Stool Co.

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Royal Metal Mfg. Co.
Rastetter & Sons Co., Louis
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Hillyard Chemical Company
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DRAFTING DEPT. FURNITURE

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Christiansen, C.

DRAFTING DEPT. FURNITURE

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SHEDDON & CO., E. H.

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(Continued from Page 162)

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STOOLS, LABORATORY (STEEL)
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Natl. Association of Teacher Agencies
Teacher Agencies Directory

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American Crayon Company

WATER PURIFIERS
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WINDOWS—ADJUSTABLE
Austral Window Company
Detroit Steel Products Company
The Knauss Company
Truscon Steel Company
Universal Window Company
Williams Pivotal Sash Company

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Columbia Mills, Inc.
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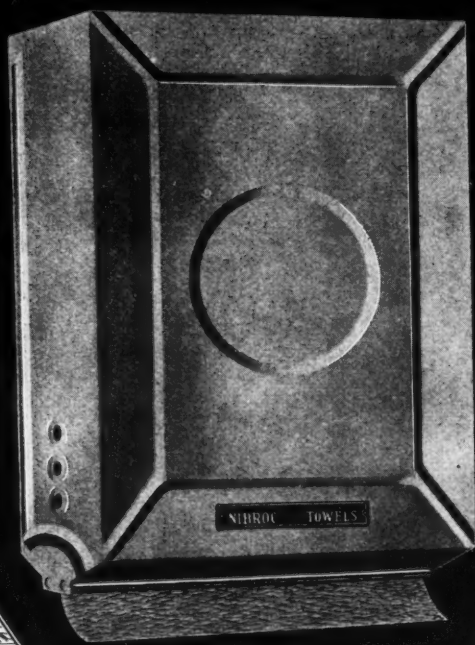
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Keep your
school health
standards high
with

NIBROC TOWELS

THEY encourage boys and girls to wash more often. NIBROCS are highly absorbent. One NIBROC dries the hands thoroughly, leaving them soft and clean. They contain no chemicals to injure the skin, and prevent the spreading of infectious diseases often found on the common towel. NIBROCS are lintless. They are served individually, fresh and clean from a dust-proof, key-locked, steel cabinet which is loaned to customers.

Write now for a generous sample of NIBROCS



FOUNDED 1852

Portland, Maine

After the Meeting



THE BABY'S GONE TO SCHOOL

There's a sort of tragic stillness in the household, everywhere—
Not a sound to break the silence, not a step upon the stair;
And the playroom in the attic—full of children, as a rule—
Is as empty as a shadow—for the baby's gone to school.

There's a desolate appearance in the playhouse in the yard,
With the little broken windows where the raindrops patter hard;
In a corner, quite deserted, stand the Teddy Bear and mule,
Like the playhouse, oh, so lonesome—for the baby's gone to school.

In the barn the little wagon, scratched and battered, stands alone;
At the slightest touch it shudders, with a lonely little moan.
And the Policeman doll, neglected, sitting on his broken stool,
Sobs inside his heart of sawdust—for the baby's gone to school.

Why the swing is hanging empty, twisted sadly, in despair;
And the poplar trees are sighing in the chill September air;
And the very sky is heavy and the ground is damp and cool;
And my heart is sad and lonely—for the baby's gone to school.

But the baby, strong and sturdy, with a twinkle in his eye,
With a front tooth sadly missing and a brand new hat and tie,
With his smiling face as shining as the water in a pool,
Is as happy as a swallow—for the baby's gone to school.

—Martha Coleman Sherman.

Artless, Indeed

"What does your father do?" asked the principal.

"Please, sir, he doesn't live with us; mamma supports me."

"Well, then, how does your mother earn her living?"

"She gets paid for staying away from papa," answered the child artlessly.—Boston Transcript.



The Professor: "I'm told that William Shakespeare once slept in this cottage."

Native: "They've told 'ee wrong, then; we ain't never 'ad a lodger o' that name!"—London Opinion.

The Wrong Teeth

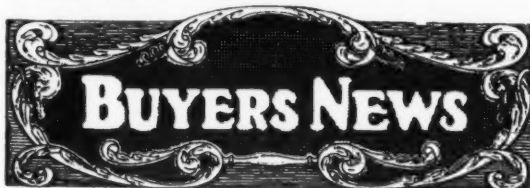
A school-board member, who explained in detail an involved school situation to a meeting of citizens, used the following story as an apology for the length of his address:

A certain minister cut the length of his Sunday sermons to such an extent that the school trustees remonstrated.

"You see, gentlemen," said the minister, "my upper teeth don't fit. I'm afraid they will fall out if I speak more than three or four minutes. If you could raise \$28 by a special collection, I might buy a new plate from Dentache and Zahnpaste, the Chicago mail-order house."

The collection was taken and the teeth were bought with marvelous results. Instead of speaking forty-five minutes, the minister now preached two and a half hours. Again the trustees remonstrated.

"I'm sorry," explained the minister. "Since I have these teeth I can't stop talking. The reason is clear from a letter which Dentache and Zahnpaste just sent me. By mistake they shipped me a ladies' plate."



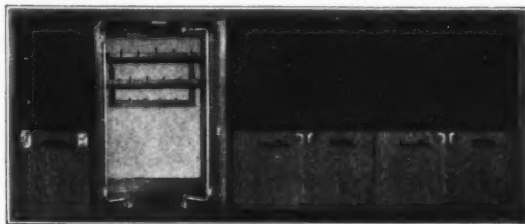
NEW TRADE PRODUCTS

Airmat Filters for School Buildings. Mechanical ventilation and the removal of dust, dirt, and bacteria by air filtration has received considerable attention on the part of engineers, school and health authorities.

Airmat filters, manufactured by the American Air Filter Company, Louisville, Ky., are believed to offer the most practical benefits in school sanitation through savings in fuel, cleaning, and redecorating and decreases in absence among pupils. A survey of the airmat filter equipment as used in the schools of Duluth, Minn., was recently made by the A. C. Nielsen Company, which proved conclusively that the air-filter equipment produces heating economy, greater cleanliness with a saving in dusting labor and redecoration costs, and better health among the pupils. The Endion School, which uses eight 5-pocket airmat units, has reported a fuel saving of \$714, 75 per cent less dusting labor, a saving of \$105 in redecoration, and a decrease of 13.8 per cent in absenteeism. The Duluth schools now use airmat filters exclusively and four buildings have been fully equipped for purposes of greater cleanliness, and better air conditioning.

Complete information about the airmat filters may be obtained from the American Air Filter Company upon request.

Austral School Wardrobe. The economy and possible management values of built-in wardrobes for schools have been generally recognized. An extended survey of the educational values of wardrobes, coupled with a study of the structural and economic requirements of the same, has led the Austral Window Company, of New York City, to develop an entirely new school wardrobe.



THE NEW AUSTRAL WARDROBE

The Austral Window Company school wardrobe has been especially developed for (a) flexible and free use of all wardrobe space, (b) maximum service of the hardware parts, (c) rigid and accurate construction of the parts for free use of the blackboards, (d) easy, silent, and safe operation, (e) maximum sanitation, and (f) elimination of unnecessary encroachment of classroom space.

A complete catalog and specifications are available from the home office of the firm at 101 Park Ave., New York, N. Y.

Announce Educational Films. The Bell & Howell Company, Chicago, Ill., manufacturers of educational motion-picture films, have announced the completion of 120 educational 16 mm. films. Of the total number, 52 have been equipped with sound-on-the-disk accompaniment, for lecture use. The films are of scientific and educational character and include animal, bird, and insect life, astronomy, geography and travel, and

botany. All of the sound pictures are suited to the project-o-phone, the portable sound-movie projector, recently put on the market by the firm. The silent pictures are adapted for general classroom purposes and a number of them have advanced as well as elementary titles.

PERSONAL NEWS

Join Lyon Company. Mr. S. S. French and Mr. J. S. Sprott, two men with practical experience in the manufacture and marketing of steel storage and office equipment, have recently become associated with Lyon Metal Products, Inc., of Aurora, Ill.

Mr. French will be in charge of the manufacture and marketing of a new line of metal products, while Mr. Sprott will direct the sales for the new division. Mr. French was for a number of years the president of the Berger Company, of Canton, Ohio. Mr. Sprott is known for his work in the steel office equipment and kindred fields.

Mr. Gibson with A. H. Andrews. C. E. Gibson, for many years a sales executive of the American Seating Company, is now connected with the A. H. An-



MR. CLINTON E. GIBSON

draws Company, in active charge of sales promotion work.

Mr. Gibson makes his headquarters at 107 South Wabash Avenue, working from the Chicago office of the A. H. Andrews Company in an executive capacity a good deal as he did for the American Seating Co.

Mr. Gibson is a man of unusual personality and has contact with an exceptionally large number of school executives.

IMPORTANT PUBLICATIONS

Floor Treatment and Maintenance. The subject of treating and maintaining school floors is an important one. It involves a study of various surfaces and the means of maintaining them.

Under the title of "Floor Research," Mr. James H. Longshore, of the Continental Chemical Corporation, of Watseka, Ill., has issued a booklet of 48 pages, giving considerable original information on the treatment and maintenance of linoleum and cork tile floor coverings, and the use of tile, terrazzo, marble, and rubber for floors. Special attention is also given to the treatment and maintenance of concrete and slate floors. A directory of floors and floor manufacturers is included for the use of architects and school authorities who contemplate new floors for their schools.

A copy of the booklet may be obtained by writing to Mr. Longshore, at 708 Tower Building, Chicago, Ill.

Announce Music Text. A music textbook covering the history and romance of music for junior high schools has been announced by the educational division of the RCA Victor Company, of Camden, N. J. The textbook which is the work of Miss Hazel G. Kinsella, author of the Kinsella readers, is entitled *Music and Romance for Youth*, and is intended for pupils in junior high schools, platoon, and consolidated schools. It is arranged to offer an abundant and diversified selection of music for study to meet individual teaching requirements, and each selection has been chosen from among the most beautiful and nationally characteristic of the world's folk music, and from the art works of the great composers. There is an interesting foreword by Dr. Frances E. Clark.

Publisher Passes Away

Charles E. Merrill, founder and for many years president of the Charles E. Merrill Company, publishers, died at his home in New York City, in August, at the advanced age of 83. He was the father of Charles E. Merrill, Jr., who has been president of the firm since the retirement of the senior Merrill. The firm maintains offices in New York City and Chicago, and has an extensive list of textbooks for elementary and secondary schools. For many years it has specialized in reading.



The "White Turtle" and the "Red Crab," early Philadelphia fire engines, racing to a fire.

Fighting Fire with Fairness

IT was Benjamin Franklin, founder of mutual insurance, who said, "An ounce of prevention is worth a pound of cure." Further, he said it regarding the prevention of fire.

It is not strange therefore, that mutual fire insurance companies have concerned themselves actively with fire prevention.

It is obvious that if you can cut down the number of fires, you can reduce the cost of insuring against them. It will also be admitted readily that more potent than any other factor in preventing fire, is the intelligent desire and interest of property owners to prevent them.

Among mutual fire insurance policyholders—and there is a great

army of them—the fundamental fairness of the mutual plan of insurance, arouses the interest of the property owner against fires. The mutual policyholder knows that any economy effected by his company benefits him directly. He knows that fewer fires means cash dividends to him—reduction of cost.

During 1929, the policyholders of the seventy-five Federation Companies received cash dividends totaling \$13,263,750.00 as a result of care and precaution in fire prevention.

A booklet of interest to any property owner is available on request. Address Mutual Fire Insurance, Room 2202-C, 180 North Michigan Avenue, Chicago, Illinois.

An Unparalleled Record

75 leading, legal reserve companies under State supervision constitute the Federation of Mutual Fire Insurance Companies. The oldest Federation company was founded in 1752. Five others are more than 100 years old.

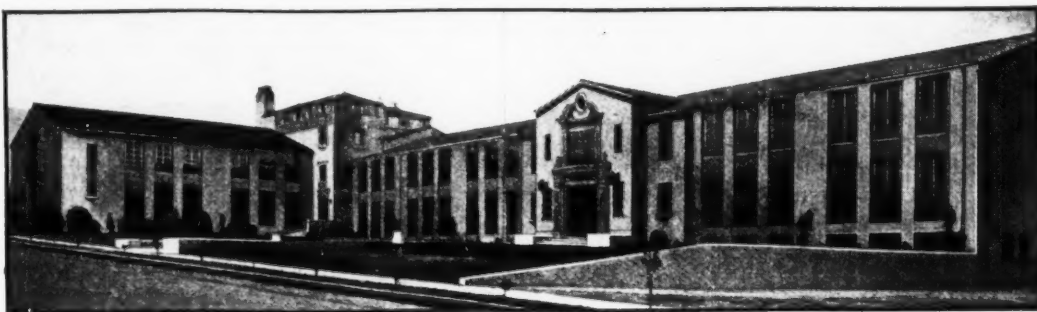
Of the remaining companies—

9 are between 75 and 100 years old
10 are between 50 and 75 years old
30 are between 25 and 50 years old
20 are between 10 and 25 years old

The Federation companies are protecting property to the extent of six billion dollars—have assets in excess of ninety million dollars—have returned to policyholders savings of more than one hundred and thirty millions of dollars.

Mutual Fire Insurance
FEDERATION OF MUTUAL FIRE
INSURANCE COMPANIES

*John Muir Jr. High School,
Burbank, California.*



GENERAL ELECTRIC COMMERCIAL REFRIGERATOR

gets 100% *in deportment!*

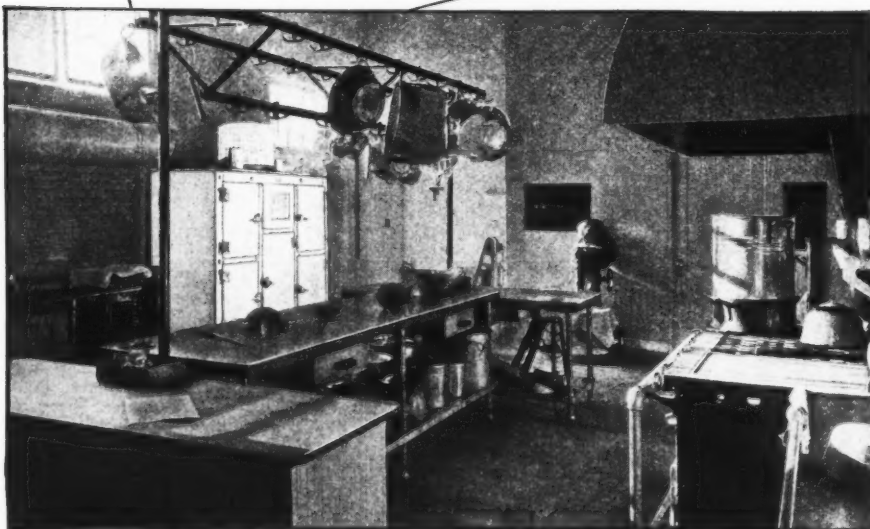
REPORT CARD	
NAME	<i>General Electric Commercial Refrigerator</i>
DEPARTMENT.....	<i>100%</i>
NEATNESS.....	<i>100%</i>
ATTENDANCE.....	<i>100%</i>
JOHN MUIR Jr. HIGH SCHOOL	

Installed in John Muir Jr. High School last September, it was never turned off until school closed.

One hundred per cent for deportment! Isn't that the kind of refrigerator that *every* school wants in its cafeteria or kitchen? Last summer the John Muir Jr. High School at Burbank, California, built a beautiful, modern cafeteria with the very latest type of kitchen equipment. A General Electric Commercial Refrigerator was installed. Not to this day has even so much as a temperature adjustment been necessary!

See the picture of this Refrigerator below. All foods are kept readily accessible—instantly within reach. No unnecessary amount of floor space is occupied by it. Because every inch of shelf space in this compact refrigerator is utilized, no waste current is consumed in refrigerating large areas of unused space. With this refrigerator, attendants don't have to "walk in" to get foods; they merely "reach in."

Quiet, reliable, efficient, economical—the General Electric Commercial Refrigerator—with its entire mechanism protected with *sealed walls of steel* from air, dirt and moisture—keeps foods and milk unfailingly below the 50 degree bacterial danger point. It saves food, space, steps, time, labor—and money. May we send a specialist to discuss *your* requirements? Or—for a catalog, address Section CK-9, Electric Refrigeration Department, General Electric Company, Hanna Building, Cleveland, Ohio.

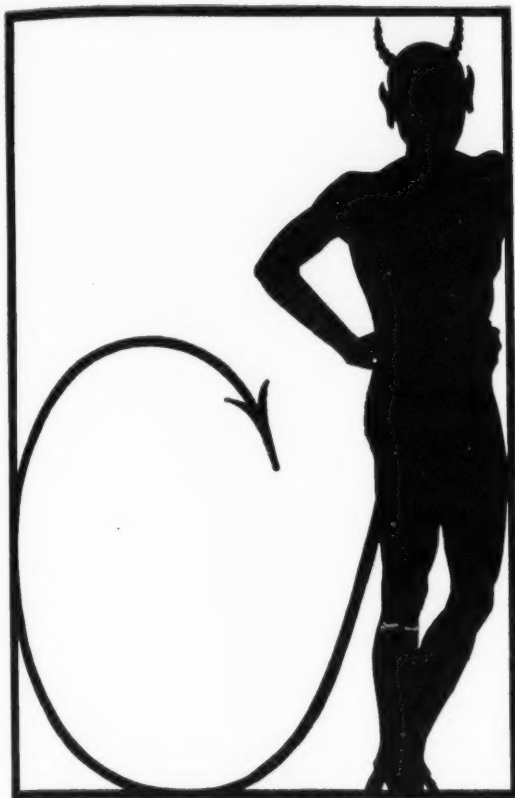


Note the convenient arrangement in the kitchen. With the General Electric Commercial Refrigerator, attendants merely "reach in" for foods.

GENERAL ELECTRIC

COMMERCIAL REFRIGERATOR

HOUSEHOLD REFRIGERATORS • ELECTRIC WATER COOLERS • ELECTRIC MILK COOLERS



Are you under
the spell of that
little demon-

ALMOST?
Almost — but not quite —

For homes, too.

Finnell for home use.
Twin disc. High speed.
Ample power. Price
anyone can afford.
Waxes, polishes, fin-
ishes, scrubs, — wet or
dry. Sold on terms.



The new
FINNELL
Combination

Scrubs faster
than one can
mop. Cleaner
floors at lower
cost than mop-
ping. Scrubs and
picks up water
in one operation.



A Size for Every Purpose

The FINNELL scrubs and polishes —
electrically, exerting from 35 to 60
pounds pressure on the brushes (de-
pending upon the size of the machine).
Clean water is provided for every
square inch of floor space and the
brushes dig down beneath surface dirt
until every particle is routed, even
from between the cracks and crevices.

That phrase has defeated the ambition of countless men and women.
It may defeat the purpose of your school board to have an up-to-
date school system, the most effective educational methods, highly
attractive school buildings, simply because floors are allowed to
remain almost—but not quite—clean.

But why?

Text books are not allowed to remain almost — but not quite —
accurate. Teachers are not allowed to be almost — but not quite —
prompt.

Why not defeat the little demon wherever he appears?

Keep floor cleaning methods up-to-date. Install a FINNELL SYS-
TEM, adapted to your school needs, floor area, the type of floors
and the treatment they require. Here, too, you must beware of
hastily selecting a floor machine, that is almost—but not quite —
suited to the work. If it is too large or too small, or if it only scrubs,
when you have some floors that should be polished, that little demon
“almost” is at work again. FINNELL is the only system permitting
complete flexibility in the creation of a system adapted to your
needs.

It costs nothing to have a FINNELL expert make a survey of your
school system and recommend which of the eight FINNELL models
and auxiliary equipment is best suited to your requirements. Why
not investigate now? For particulars address FINNELL SYSTEM,
INC., 809 East St., Elkhart, Indiana. Factories in Elkhart, Ind., and
Hannibal, Mo.

FINNELL

EST. 1906

ELECTRIC FLOOR MACHINE

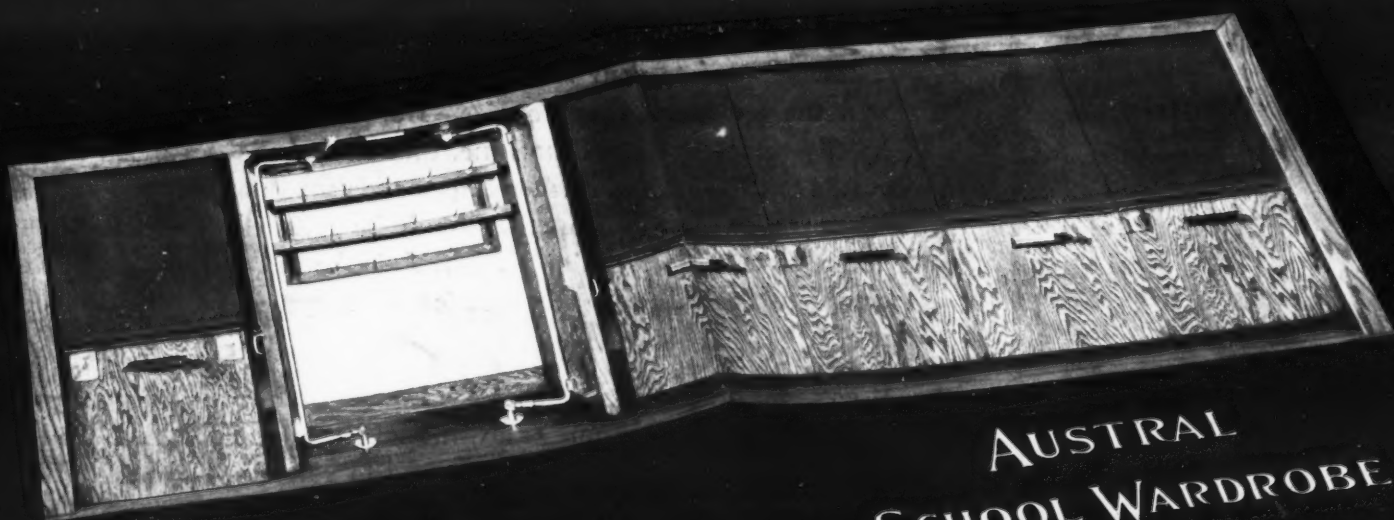
IT WAXES - IT POLISHES - IT FINISHES - IT SCRUBS

THE NEW

MULTI UNIT

ANOTHER STANDARD FOR SCHOOLS . . . DEVELOPED AND
PERFECTED BY AUSTRAL ENGINEERS WHO PRODUCED
THE AUSTRAL WINDOW . . . MODERN, PERMANENT,
ECONOMICAL, CONVENIENT . . . COMPLETE DESCRIPTION,
DRAWINGS, SPECIFICATIONS IN THIS NEW BOOK.

SEND FOR YOUR COPY



AUSTRAL
SCHOOL WARDROBE

AUSTRAL WINDOW CO.

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